VOL. 74 NO. 1

textile bulletin

JANUARY • 1948

TEXTILE RESEARCH ACHIEVEMENTS OF 1947 are reviewed by Julius B. Goldberg of J. P. Stevens & Co. in this issue. Page 29.

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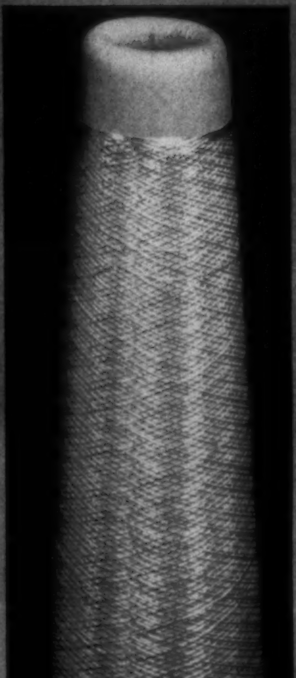
49 YEARS OF PERFECTING ONE THING



Latest improvement —Smooth Surface Cone banded with flock finish.

This year is SONOCO'S 49th. Since 1899, when the first hand-made SONOCO cone was produced, this company has continuously worked to improve its products and methods. From a handful of employees working by rule-of-thumb methods, the organization has grown to thousands working under modern scientific controls with precision machinery.

Result: SONOCO has not only kept abreast of progress in the Textile Industry but leads the world in the production of paper carriers.

SONOCO PAPER CARRIERS
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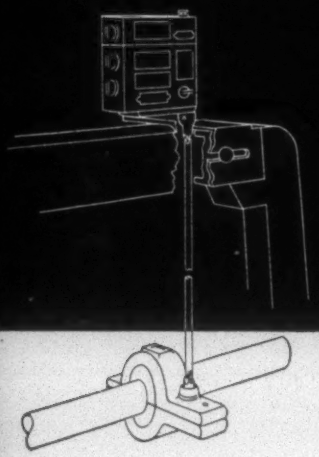
SONOCO PRODUCTS COMPANY

BRANTFORD ONT. HARTSVILLE S. C. MYSTIC CONN.

DEPENDABLE SOURCE OF SUPPLY

Veeder-Root Vantage Points

"BQ" BRACKET for 2-3 Pick Counters



Eliminates all thrust to [illegible]
and all need for housing

This rugged, cast-iron counter bracket and heavy brass collar eliminate any thrust to the counter drive-shaft from the worm-and-housing drive connection. And what is more, this BQ Bracket is specially designed to eliminate any need for supporting the worm housing. This is extra protection for counter-accuracy — extra insurance for counter-life.

There are 11 other *Vantage Points* which you get with every Veeder-Root 2-3 Pick Counter you buy. Have your Veeder-Root representative show you these 12 points, and explain exactly how they pay off. It's well worth half an hour of your time. *Write and say when.*

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HARTFORD 2, CONN.
GREENVILLE, S. C.

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VEEDER-ROOT 2-3 Pick Counters

Quickly Convertible from 2 to 3-Shift Operation
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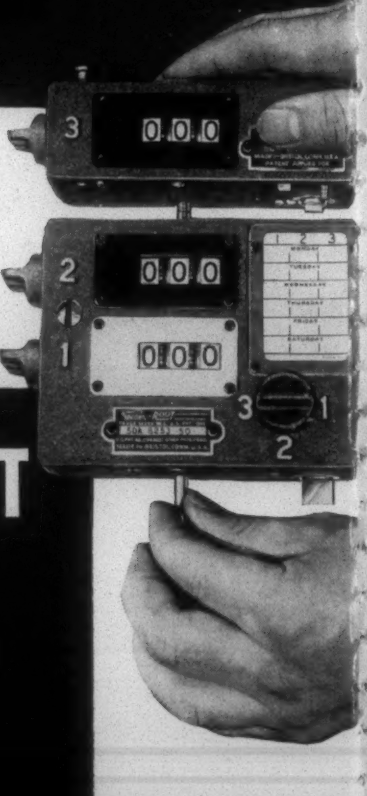

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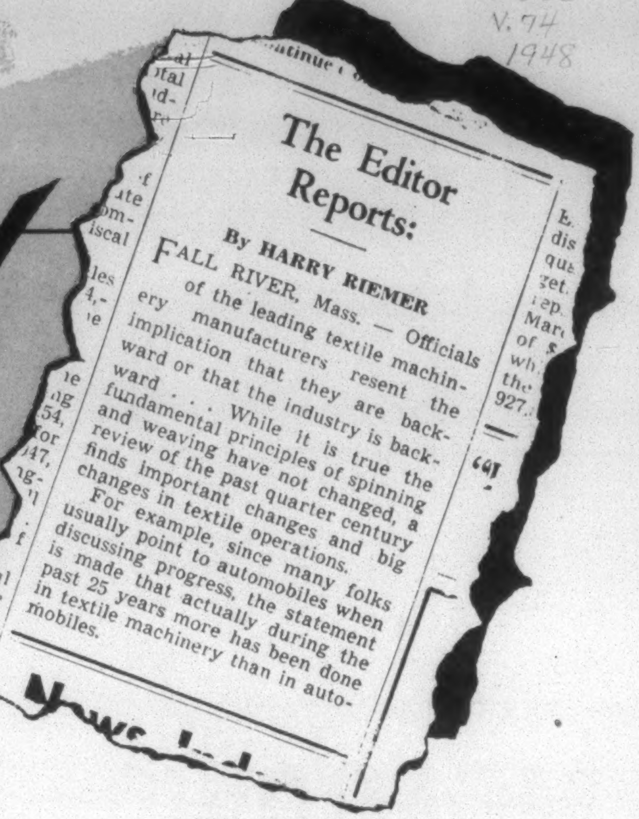
Right Mr. Editor!



The Editor Reports:

By HARRY RIEMER

FALL RIVER, Mass. — Officials of the leading textile machinery manufacturers resent the implication that they are backward or that the industry is backward . . . While it is true the fundamental principles of spinning and weaving have not changed, a review of the past quarter century finds important changes and big changes in textile operations.

For example, since many folks usually point to automobiles when discussing progress, the statement is made that actually during the past 25 years more has been done in textile machinery than in automobiles.

Clipped from the Daily News Record

Progress

In Designing the X Series of High Speed Looms during the last two decades to enable you to increase production up to 35%. X-2 XL XP cotton looms and XD rayon looms weave goods heretofore considered impossible both as to range and to quality.

In Developing scores of new attachments for existing looms. The Midget Feeler, Stafford Thread Cutter, and Sliding Bar Warp Stop Motion, to mention a few, have cut your costs while increasing your production.

In Standardizing shop procedure so that improved manufacturing methods in the foundry and in the machine shop insure uniform parts. Draper Repairs Fit.

In Expanding facilities for research and development to meet the challenge of higher speed, improved design, and newly developed materials. We aim to bring you thoroughly proven performance so that you may produce more cloth at less cost.

RETAINING LEADERSHIP **DRAPER CORPORATION** **THROUGH RESEARCH**

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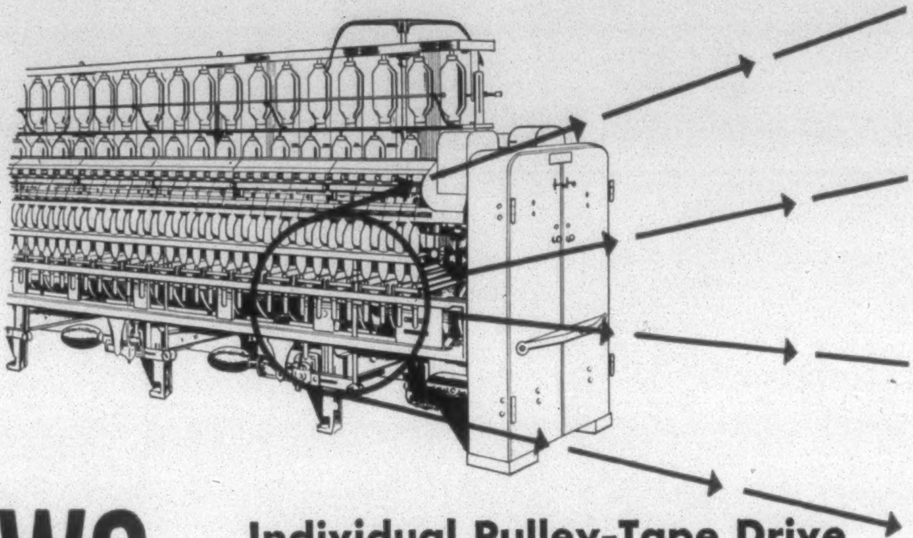
Published Monthly by Clark Publishing Company, 218 West Morehead Street, Charlotte 2, N. C. Subscription $1.50 per year in advance. Entered as second-class mail matter March 2, 1911, at Postoffice, Charlotte, N. C., under Act of Congress, March 2, 1897.

MODERNIZE

YOUR OLD BAND DRIVE SPINNING FRAMES



With

MEADOWS Individual Pulley-Tape Drive CONVERSIONS!

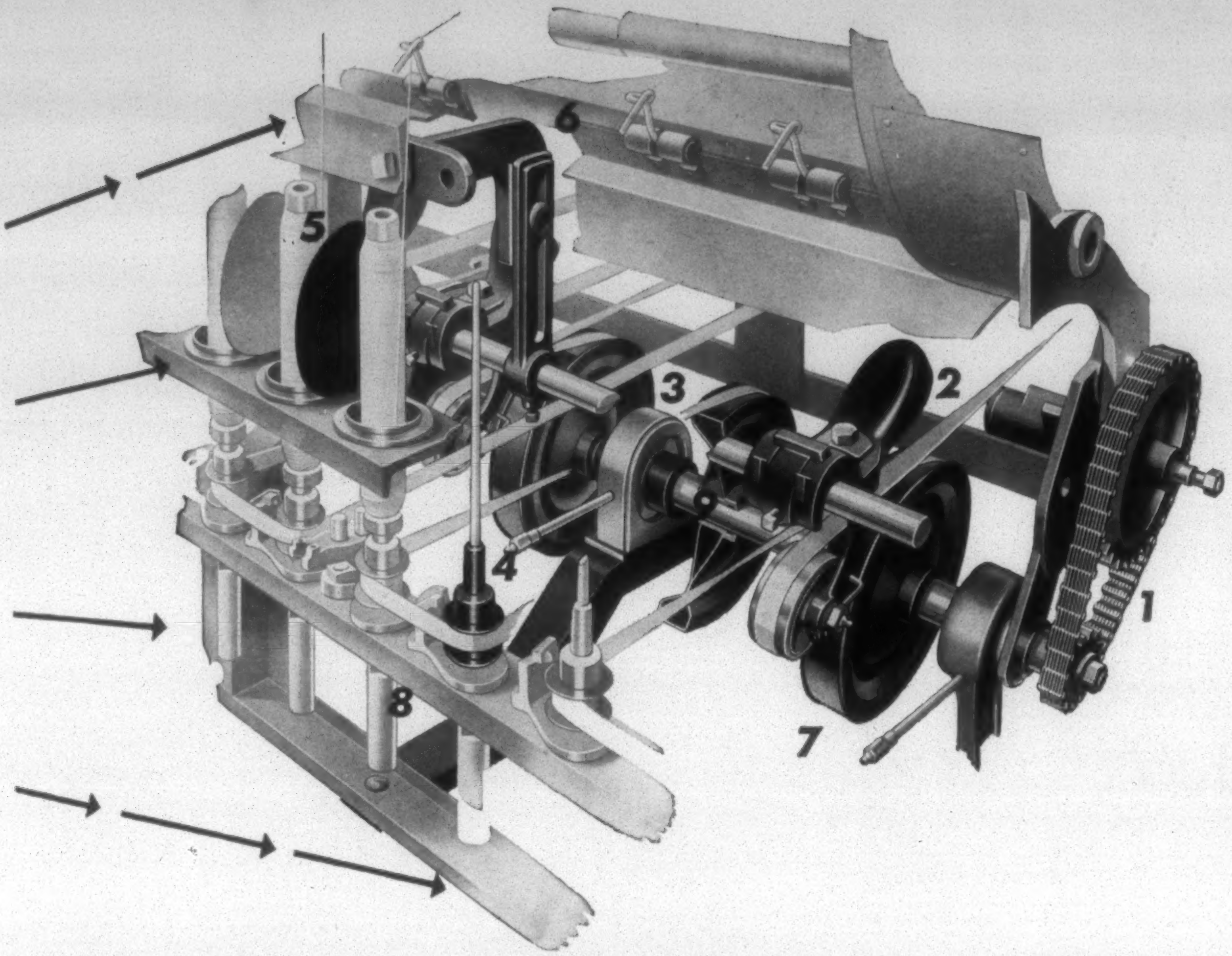
Old model band-drive frames can be converted to tape-drive, and made to operate at peak efficiency, by installing the parts shown on the opposite page. Higher speeds can be attained with less vibration and with fewer ends down; spindle speeds are uniform, which means uniform twist, better package and more yarn.

Light-weight solid aluminum alloy Separators mean less wear on yarn while it is being spun: Ball Bearing Tape Tension Pulleys mean low power consumption, no tapes off due to choked or sticky pulleys: silent Chain Drive means less noise, less vibration: individual driving pulleys, and high strength ground and polished shafting, mounted on heavy duty ball-bearings means low power consumption, smooth operation and no more cylinder trouble.

On frames that are already tape-driven, the installation of our individual Driving Pulleys, high strength shafting and heavy duty ball-bearings will eliminate cylinder trouble *for keeps.* This is because the power input is through a steel shaft, rather than a tin cylinder. The driving pulleys are made of much heavier steel than cylinders, yet do not coast, because the mass of rotating metal is near the center of gyration. *No more heads to jerk out.*

Let one or our representatives show you how a Meadows Conversion will increase production on your spinning frames.

MEADOWS MANUFACTURING



1. CHAIN DRIVE: 1″ or ¾″ center guide, silent chain, hardened steel cylinder gear, cast iron machined Jack-gear, cast iron swing arm. Jack-shafts can be furnished either plain or ball bearing.

2. MEADOWS TENSION PULLEY ASSEMBLY: B-214 LA Ball Bearing aluminum alloy Tension Pulley, 3¼″ diameter, 1¼″ crown face; B-243 Tension Weight, B-241 Spacing Collar; M-48 curved steel Washer; Cap Screw and Set Screw.

3. B-299 UNIVERSAL BALL BEARING CYLINDER UNIT: Built with heavy duty Fafnir Bearings; metal shields both sides for dust elimination; self aligning. Can be furnished for any particular installation.

4. NEW WHORLS: Can be furnished to your specifications.

5. ALUMINUM ALLOY SEPARATOR SHIELDS: Made from high strength aircraft sheet aluminum, with cast hub. Brackets, rods and accessories can be furnished with the blades. Shields will bend without breaking.

6. ADJUSTABLE CAST IRON SUPPORTING HANGERS: For each make of frame.

7. INDIVIDUAL PRESSED STEEL DRIVING PULLEY: Made of 18 gauge, high strength cold rolled steel, welded to steel hub; steel hub has shaft-protecting ring inside, to prevent set-screws from biting into shaft, making pulley easily adjustable.

8. NEW CAST IRON CROSS-GIRTS: Can be furnished for any particular application.

9. HIGH STRENGTH STEEL SHAFTING: SAE 1035, cold rolled, ground and polished.

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WALTER S. COLEMAN,
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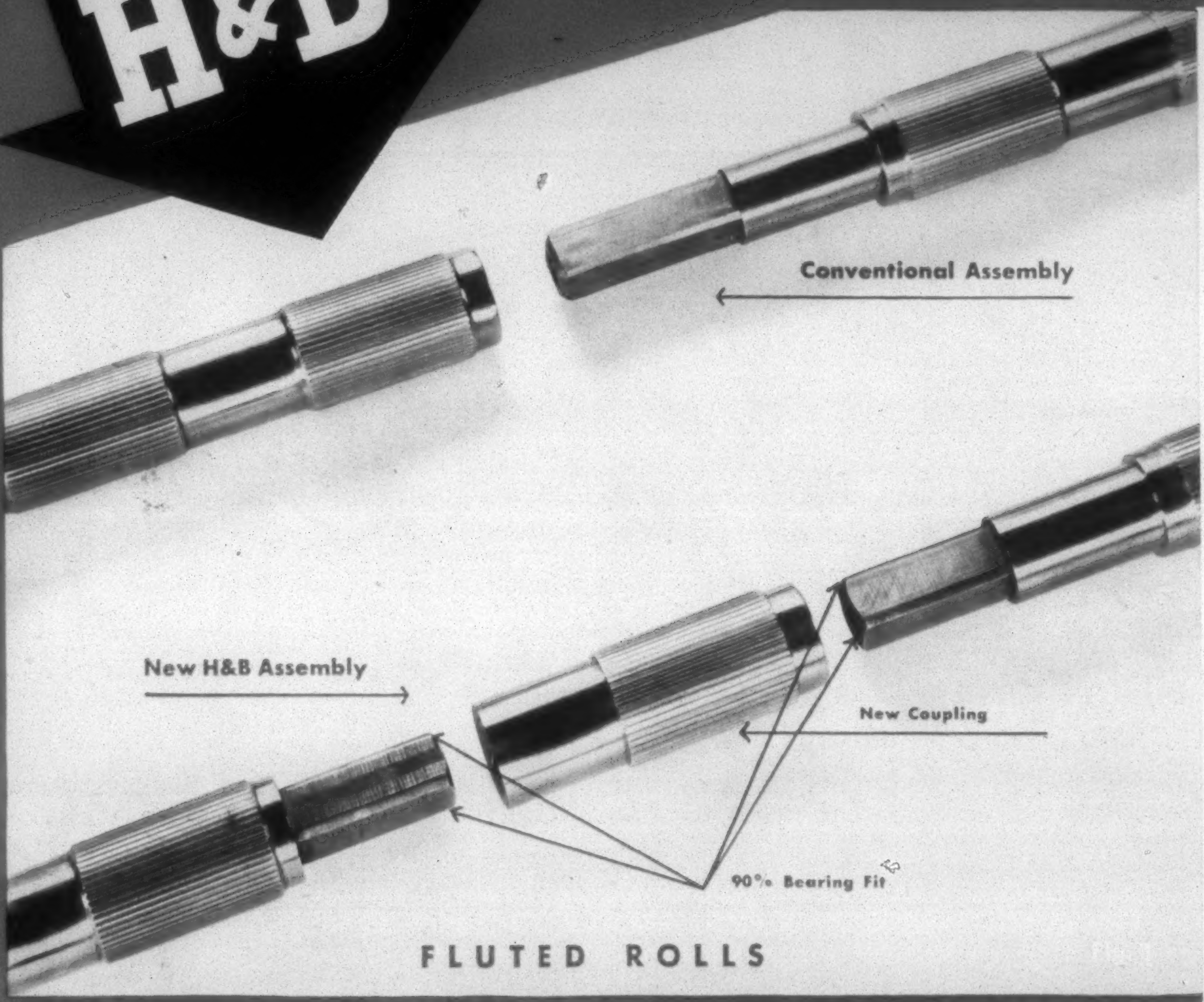
H&B

SPINNING



FLUTED ROLLS

PRECISION is the keynote in the manufacture of fluted spinning rolls by H & B. Precision tooling by skilled workers produces rolls with bosses perfectly fluted and absolutely concentric with the bearing surfaces.

Heat treated steel, hardness tested and proved, prevents any long roll distortion, and the finish is highly polished for shining smoothness. This precision workmanship, coupled with our traditional insistence on top quality materials, produces fluted rolls which offer real spinning advantages to users of H & B textile machinery.

H&B AMERICAN

Builders of Modern

FACTORY, EXECUTIVE OFFICES AND EXPORT

FRAMES . . . . .

IT'S THE LITTLE THINGS *that make a Big Difference*

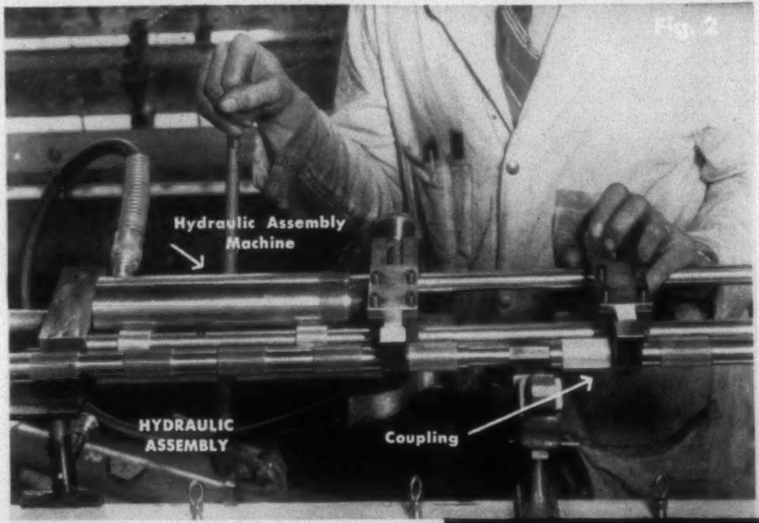


Fig. 2

A new feature, and a forward development in H & B fluted rolls, is the coupling* recently designed to achieve a better fit between roll sections and thus assure accurate and true alignment of the complete drawing or feed roll. The connection between roll sections has always been a problem, and formerly it was necessary to individually match each pair and number the male and female ends to get a good fit. Even then, as can be seen in Fig. 1, the bearing fit was not so good as it is now.

Now, with H & B's exclusive, precision made coupling, precision assembled as in Fig. 2, the fit *is* perfect. Notice, in Fig. 1, how the male end has been evenly and tightly fitted all along its length. A further advantage of this new coupling is that it permits complete interchange of parts, an economy not possible with the old numbered sections.

Our fluted spinning rolls, their design and production improved, their high material and manufacturing standards maintained, are another example of the achievement of quality at H & B.

*Patent applied for

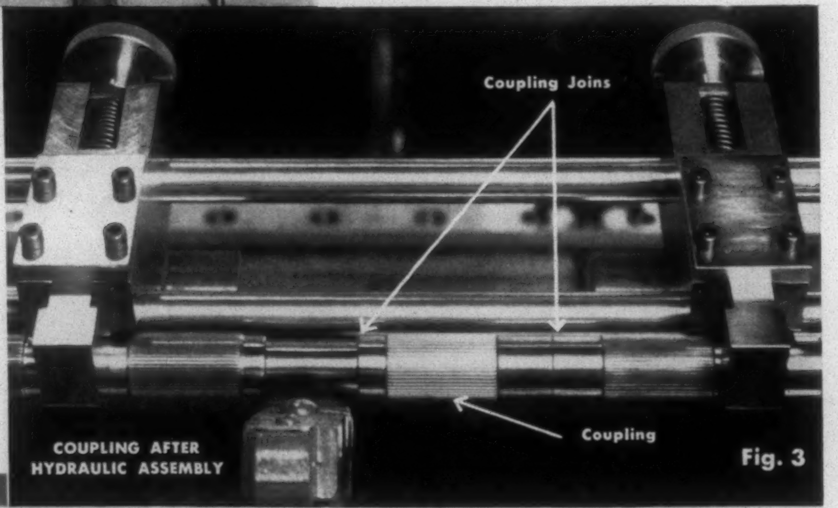


Fig. 3

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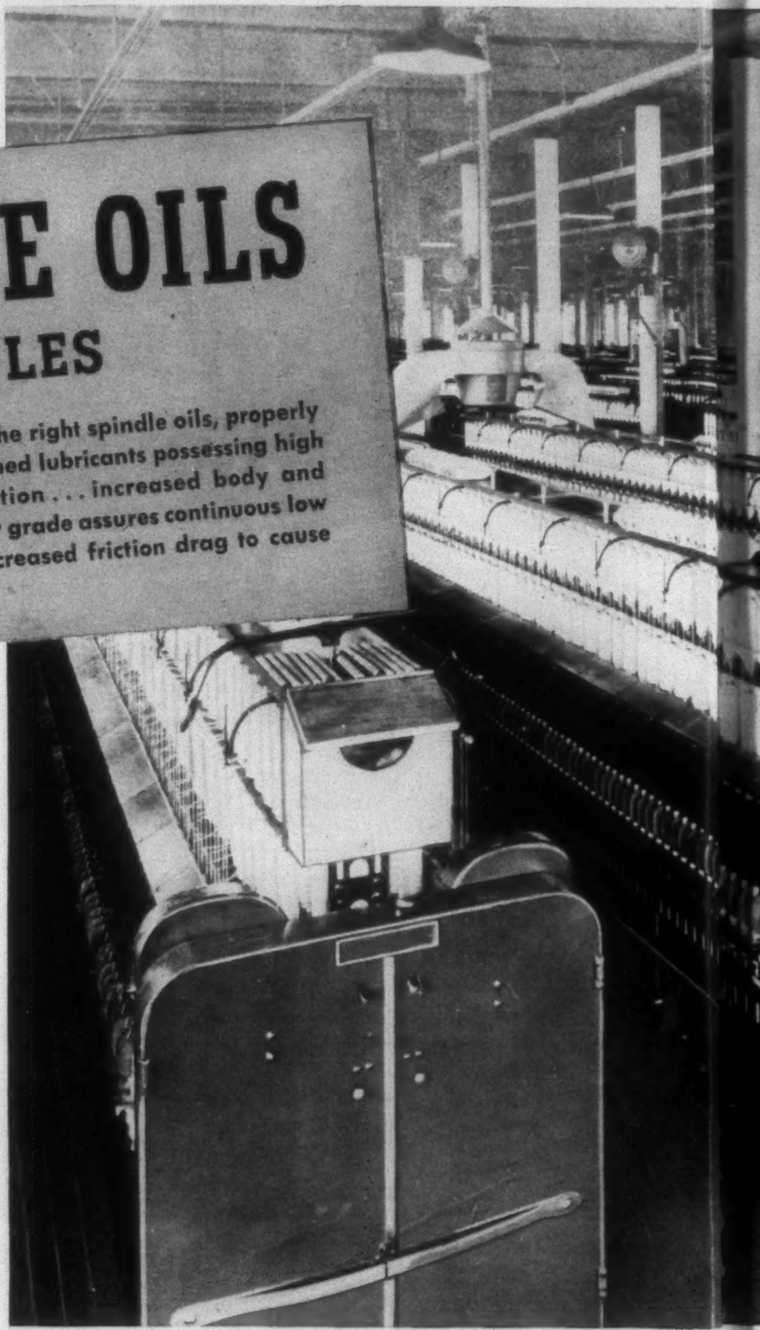

LILY WHITE OILS

ON SPINDLES

Reduction of power costs results from use of the right spindle oils, properly applied. Sinclair LILY WHITE OILS are finely finished lubricants possessing high stability characteristics to resist deterioration . . . increased body and deposits . . . during service. Use of the proper grade assures continuous low power consumption because there is no increased friction drag to cause power loss.

Besides contributing to low power consumption Sinclair LILY WHITE OILS help reduce maintenance cost by promoting long bolster life. Their worth was proven in many plants during the war years when mills were operating at top capacity and replacement parts were difficult to obtain. LILY WHITES come in viscosities to suit all operating speeds. Our lubrication counsel is available in solution of your problems.

SINCLAIR

CONSUMPTION...

TEXTILE LUBRICANTS

FOR FULL INFORMATION OR LUBRICATION COUNSEL

WRITE SINCLAIR REFINING COMPANY, 630 FIFTH AVE., NEW YORK 20, N. Y.

Deering, Milliken's modern, efficient Excelsior Mills at Clemson, S. C., are one of the nation's important makers of rayon tire cord.

In keeping with this manufacturer's alert, up-to-date methods, twisters, looms and other machinery are anchored in the *modern way* — on UNISORB . . . result: no bolts, no screws, *no damage to floors.*

UNISORB anchoring is quick, easy, inexpensive. A special cement binds the UNISORB to the machine feet and the floor — permanent set absolutely prevents any riding.

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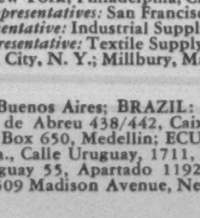
Send for sample and complete specifications. Ask for your copy of "Why it Pays to Anchor Your Machines with UNISORB."



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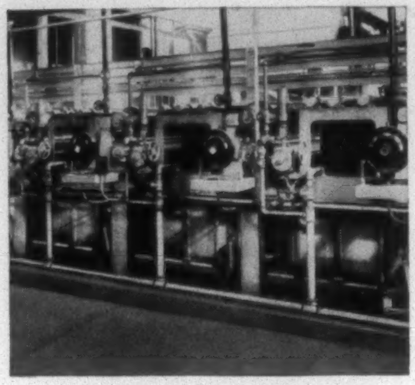
HOW THESE OPERATIONS CAN SOLVE THESE PROBLEMS FOR YOU



SOAPING VAT COLORS

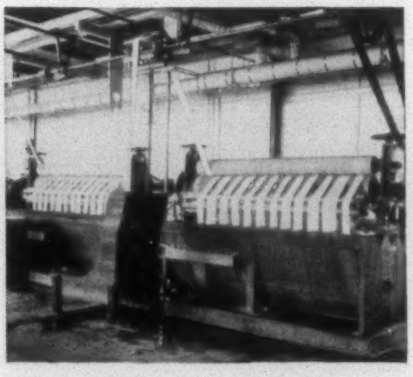
1. **Removing excess and lightly attached dye-stuff.**
2. **Getting clear, bright colors that will not rub off.**

Mere soaping alone isn't the answer to these two problems. It takes a *good soaping* with Armour's FLINT CHIPS to remove excess dye-stuff, clear the whites, brighten the colors. Since maximum soaping results are attained at about 180°-190° F., high titer FLINT is ideal. Besides, you get a thorough boil with FLINT, because it stays active even under steam. Results—sparkling, clean cottons!

FULLING, SCOURING REWORKED WOOL

1. **Fulling and cleaning the wool in a minimum amount of time.**
2. **Obtaining a clean, clear-looking piece of fulled cloth.**

For really successful fulling and scouring it takes Armour's TEXSCOUR Soap. TEXSCOUR, a red oil base soap in flake form, affords superior wetting and penetrating properties. At the same time, it has enough *body* for the fulling job. Good scouring must be done at low temperatures to keep the wool from felting and shrinking. That's why 8-12° titer TEXSCOUR cleans up fibres, leaves wool soft and resilient.



DESIZING COTTON

1. **Freeing cotton goods from sizing, prior to dyeing.**
2. **Avoiding spotty dyeing and uneven shades to secure a uniform finish.**

In desizing cotton, you need high wetting and penetrating properties rather than high detergency—a synthetic rather than a soap. The best solution to your problems is Armour's REGAL Synthetic Detergent. REGAL is a modern all-purpose synthetic that is readily soluble in cold or hot, soft or hard water. It rinses quickly and freely without insoluble deposit. Because of its swift penetration rate, REGAL reduces the time required for desizing operations, yet finished goods are free from sizing and permit level, uniform dyeing.

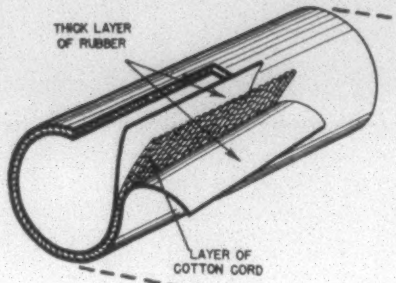
Remember, There are Armour Soaps and Synthetic Detergents to Solve All Your Textile Problems

ARMOUR and Company

Industrial Soap Division

1355 WEST 31ST STREET • CHICAGO 9, ILLINOIS

Accotex Aprons won't



Reinforced construction gives you stronger, more uniform yarn

You get constant fiber control for stronger, more even yarn when you use Armstrong's Accotex Long Draft Aprons. Accotex Aprons fit correctly. In service, they can't stretch, grow, or sag because they are reinforced by a strong cord interliner developed exclusively by Armstrong. So effective is this reinforcing that, even after years in the mill, an Accotex Apron still will fit snugly on the form on which it was made . . . proof of its stability.

Accotex Aprons have extra-long life, too. Heavy layers of rubber enclose the cord interliner to provide a tough wearing surface on both the inside and outside of the apron. The synthetic rubber used is non-oxidizing and not affected by oil.

Besides assuring constant fiber control throughout their long service life, Accotex Aprons offer these additional advantages:

SEAMLESS CONSTRUCTION—Accotex Aprons have no seams—no structural weaknesses to cause premature failure.

UNIFORMITY—All Accotex Aprons have the same composition throughout, and dimensions of every size are accurate.

CLEAN RUNNING—Accotex Aprons do not crack or scuff. Thus they help produce cleaner-running work and less waste.

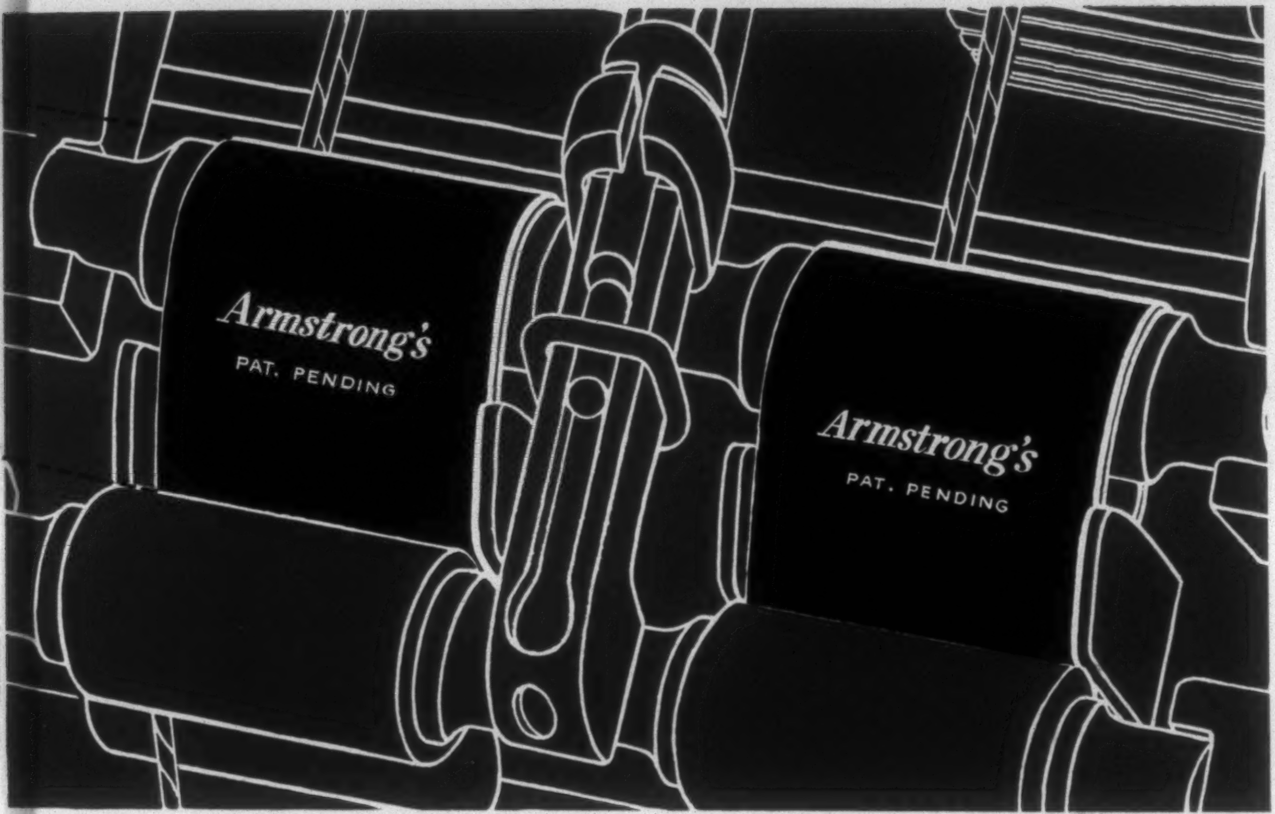
REDUCED LAPPING—Accotex Aprons are not affected by temperature or humidity. They perform with a minimum of lapping.

GOOD FRICTION—The efficient "grip" of Accotex Aprons reduces slippage.

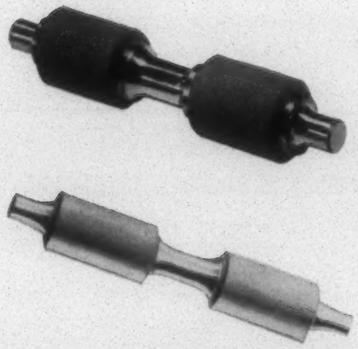
Ask your Armstrong representative for samples, prices, and additional information on Armstrong's Accotex Aprons. Or write today for descriptive literature to Armstrong Cork Company, Textile Products Department, 8201 Arch Street, Lancaster, Pennsylvania.

ARMSTRONG'S ACCOTEX APRONS

stretch or "grow"



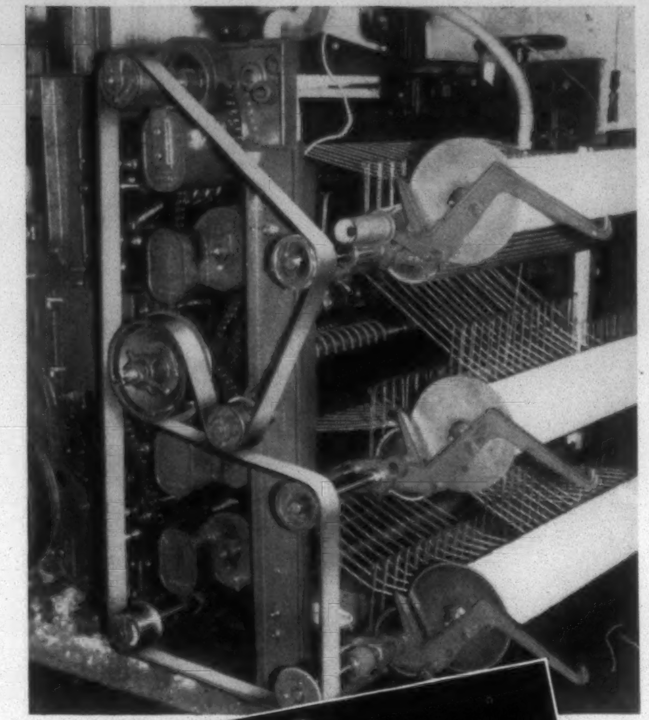
ACCOTEX COTS . . . by the makers of Accotex Aprons



Armstrong's NC727 Accotex Cot is now being used by more mills than any other roll covering. It gives you the advantages of both synthetic rubber and cork. This combination of toughness and high friction provides the maximum amount of eyebrow resistance possible today in a synthetic cot. It also results in better drafting for high yarn strength with less slicking up. In addition, Accotex Cots offer a long initial service life. They can be rebuffed as many as five or six times.

Armstrong's J490 Accotex Cot is outstandingly superior in resistance to top roll laps. You can prove this right on your own frames. It is the cot to use where lapping is a serious consideration when running either wool or synthetic fibers on cotton system equipment. The specially developed synthetic rubber compound in the J490 Accotex Cot is not affected by temperature and humidity changes.

ACCOTEX COTS
CORK COTS



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. . . IT'S FILTER PROTECTED

Walton Laboratories proudly announces the addition to its standard line of a filter-protected humidifier which will readily find its place in the textile industry.

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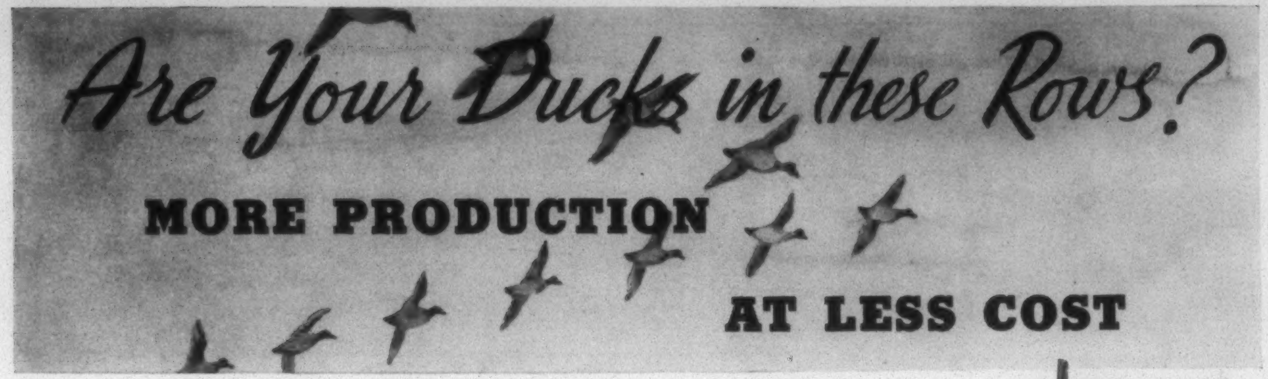

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SPREADER EQUIPPED LOOMS

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WITH "MORE PICKS-PER-MINUTE"

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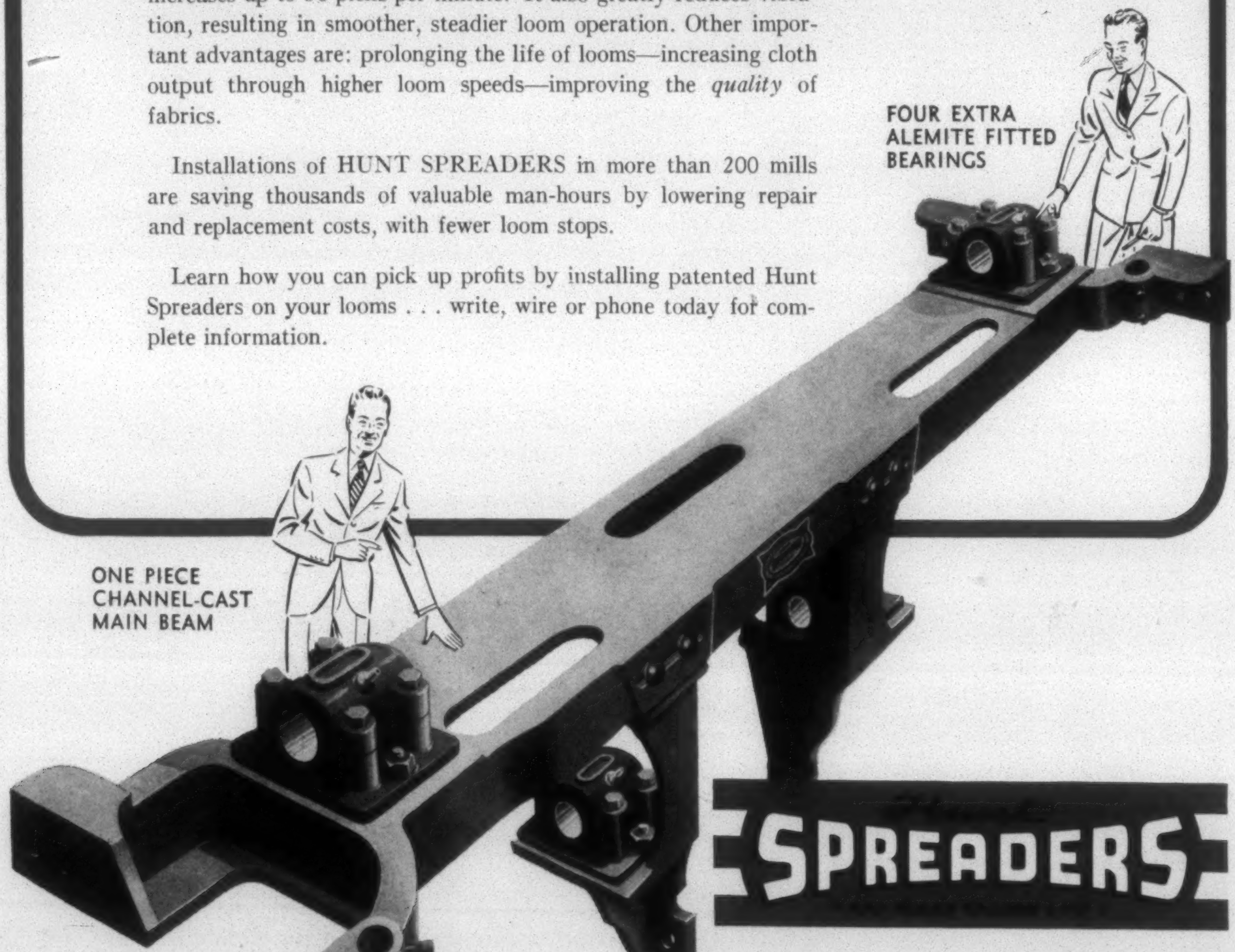
Installations of HUNT SPREADERS in more than 200 mills are saving thousands of valuable man-hours by lowering repair and replacement costs, with fewer loom stops.

Learn how you can pick up profits by installing patented Hunt Spreaders on your looms . . . write, wire or phone today for complete information.


FOUR EXTRA ALEMITE FITTED BEARINGS
ONE PIECE CHANNEL-CAST MAIN BEAM

SPREADERS

SPEED INCREASE OF 11% ON 1,700 LOOMS!

Would you like to read the story—in illustrated folder form—of how one weave room modernized 1,768 looms; and how the program resulted in steadier, speedier, more economical operation? Write today! It's yours for the asking.

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SUCCESSORS TO
MOUNTAIN CITY FOUNDRY AND MACHINE CO. AND HUNT LOOM CO.
200 ACADEMY STREET TELEPHONE 200 GREENVILLE, SOUTH CAROLINA

FORECAST

Today . . . tomorrow . . . always

IDEAL PROCESSING WEATHER

The

AMCO EVAPORATIVE COOLING AT PONEMAH IMPROVES YARN STRENGTH — AIDS SPINNING

Part and parcel of Ponemah's reputation for fine count cottons and rayons are the continuous efforts made to assure fabric superiority. An important recent step was the introduction of AMCO Evaporative Cooling.

Ponemah already had humidification. The addition of AMCO Evaporative Cooling has proved a low-cost, practical way of meeting the excessive heat burden imposed by the spinning process. The results have been greater yarn strength, more efficient spinning, improved worker comfort.

AMCO Evaporative Cooling utilizes the humidification system to absorb the frictional heat of high speed machines in conjunction with carefully controlled airflow. No ducts or expensive alterations are needed. Installation can normally be made without serious interference with production.

Right now — see for yourself how quickly this system pays for itself with greater production, lower costs. An AMCO engineer will be glad to make a survey and submit recommendations for the exact system to meet the particular conditions and needs of your mill.

FEATURES OF AMCO HUMIDIFICATION AND COOLING

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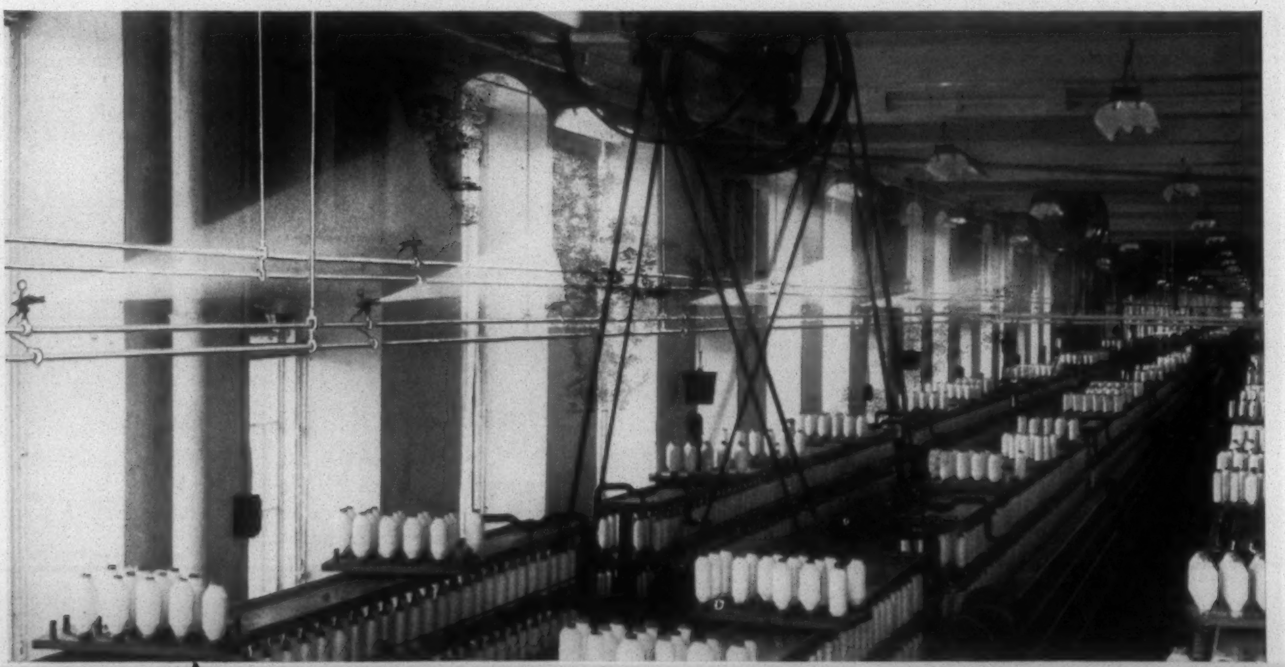

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Borderline Vision*

may be robbing you!

● BORDERLINE VISION — lighting just a shade too dim — can steal your profits without your seeing it. But — just the hairline of difference between good lighting and not quite good enough makes a difference that shows in red and black in your ledger.

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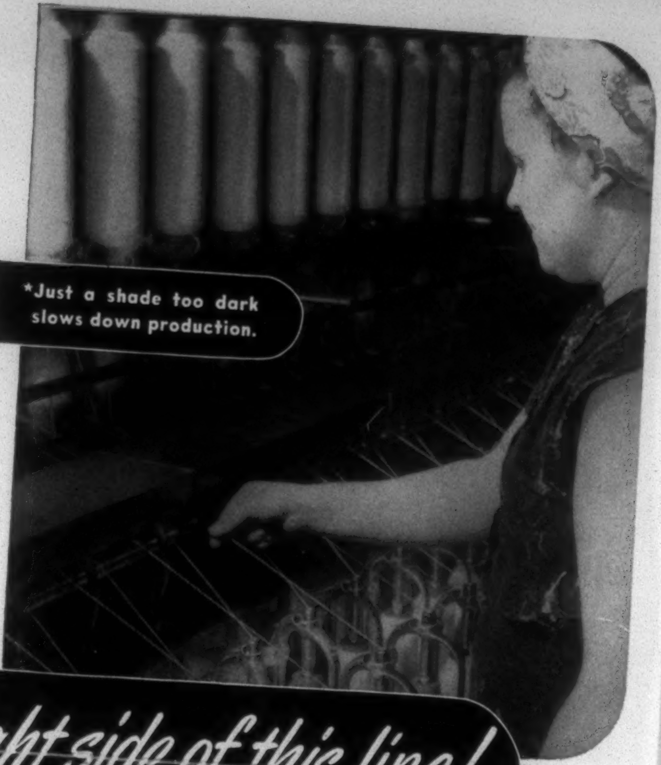

*Just a shade too dark slows down production.

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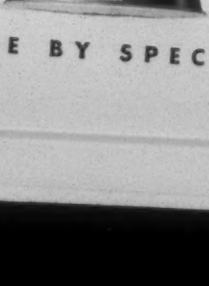

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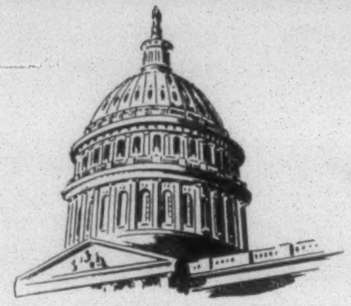

WATCHING WASHINGTON

[Exclusive and Timely News from the Nation's Capital]

Leadership of the President in Congress is at the lowest ebb since he entered the White House. A majority of his own party adherents are in open rebellion, with indication that every important proposal in his recent message to Congress, delivered in person, will go into the discard. He is charged with having put forward a tax revision proposal authored by C. I. O.'s Murray and Pressman, and also with having offered the C. I. O. "social welfare" platform, without change, as his own. His popularity had dropped almost to zero as he ended his message. Republican criticism was caustic and stinging; Southern Democrats called it an attempt to embark on another New Deal.

What the downward swoop in Truman influence in Congress means is that a legislative program that can command a two-thirds majority in both branches is taking shape. Law making in this session will be restricted to measures that can be passed over a veto. The old Republican-Southern Democratic alliance of the 79th Congress is rapidly reforming.

Tax revision will be the first legislative undertaking in the House. Republicans intend to put through a veto-proof bill, designed for certain to muster two-thirds majorities in both branches. The bill brought in by Chairman Knutson of the Ways and Means Committee is given a 50-50 chance in its present form of becoming a law over a veto.

Knutson's bill would increase the standard individual deduction to $600 for each taxpayer, his wife and each dependent, and extend to all states the income-splitting benefits now enjoyed in states with community property laws. This bill makes cuts all along the line from 30 per cent on $1,000 in income to ten per cent on the highest incomes. The Republican leadership is prepared to accept a deduction up to $650 if needed to round up two-thirds majority support.

Minimum wage legislation which will probably raise the "floor" to 60 to 65 cents becomes more certain in this Congress. There's a strong probability that Fair Employment Practices legislation will be attempted. The public health and medical service bill of Senator Taft has a fair chance of passage. Much more drastic penalties on union racketeering and bossism are rapidly shaping up, with strong prospect of passage.

New Social Security taxes of about $150,000,000 a year would be laid on employers and employees if Congress should accept the advice of the President's experts on financing a national health insurance program. While the rate of increase is not mentioned, the experts have in mind one-half of one per cent on employees, and the undetermined remainder borne by employers. The Wagner-Murray-Dingell bill would have required an over-all tax of possibly 5½ per cent.

N. L. R. B. trial examiners are lashing out in bitter criticism of General Counsel Denham in a majority of the cases coming to a hearing on Denham-filed charges. In some instances the examiners dispute facts as presented by Denham, or charge employers with provoking trouble. In other cases, Denham is charged with using the new labor law to "turn the clock back" to discarded labor law notions.

Examination of complaints filed with N. L. R. B. reveal that only labor leaders with a stranglehold on their members are resisting the closed shop provisions of the Taft-Hartley Law. Indication is that unions with members having some voice in their conduct, and not resisting the law, are getting stronger under the provisions for new employees becoming members within 30 days.

Henry Wallace's plunge into presidential politics has thrown the worst scare of 15 years into the Democratic top ranks. Wallace is trying to remove the taint of Communism and "red" support from his candidacy, and denies he's drawing his support from Communists. Democrats are trying to chart a strategy to attack him on the ground that Communists are in full control of the "fringe" parties behind him without at the same time injuring their chances of drawing support of radical voters.

Murray and a majority of the top-flight presidents of C. I. O. national unions have decided upon determined resistance to Wallace and his third party, but in doing so they have put their left-wingers in an anomalous position. Primarily for their benefit, the President is believed to have put forward his proposal for a "voters' bonus" of $40, which in practical effect would tend to redistribute wealth.

The big loophole in the proposal to shift $3,200 million in taxes from individuals to corporations is that when prices are stable or rising, the corporations generally can, and many of them do, shift the incidence back to consumers. C. I. O. leaders have declined to say whether they would call off their proposed "third round of wage increases" if the $40 tax reduction was made.

Only one-third as much working time was lost because of strikes in 1947 as in 1946, says the Bureau of Labor Statistics. Yet 1947 was one of the worst years on record in time lost through strikes. In 1947 there were 3,600 stoppages, involving 2,200,000 workers, and costing 35,000,000 days in working time. The main issue was wages, with some strikes near the end of the year over features of the new labor law.

Tinkering with the Social Security system will not be undertaken by Congress in this session. Statisticians believe the present income from payroll taxes will meet the sum of payments for approximately the next nine years. Members of the Ways and Means Committee favor postponement of consideration of changes until "a decline in inflation" and the amount of government expenditures.

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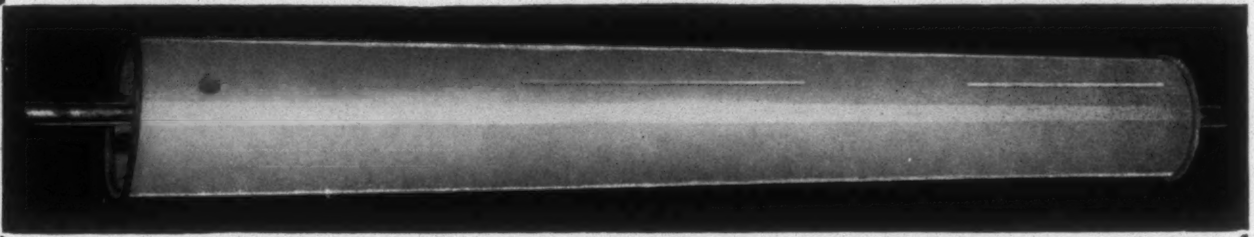

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TEXTILE BULLETIN is a member of the Audit Bureau of Circulations and the Associated Business Papers, Inc.

Now We Publish Monthly

As previously announced, TEXTILE BULLETIN in the future will appear 12 times a year instead of 24 as in the past. The change from semi-monthly to monthly publication, doubling the interval between issues, will give our staff more time to assemble, select and edit the material and will result, we are sure, in a better journal than ever before.

Probably the most important improvement is the departmentalization of every issue, with sections devoted to *Opening, Picking, Carding and Spinning; Warp Preparation and Weaving; Maintenance and Engineering; Materials Handling; and Bleaching, Dyeing and Finishing.* Thus each issue will cover in a single package every phase of yarn and cloth manufacturing and processing and will contain technical information of interest to operating executives of all departments. Incidentally, this is the first textile journal to departmentalize its technical material. For readers' convenience, the various sections will be indexed on the front cover.

Under *Personal News* and *Mill News,* TEXTILE BULLETIN will continue to carry interesting items about Southern mill men and Southern plants, while still another section will be devoted to announcements of new items, under the heading, *For The Textile Industry's Use.*

TEXTILE BULLETIN is the only journal that is edited solely for Southern manufacturers and processors of yarns and woven fabrics and as has been its policy for the past 37 years, will continue to co-operate wholeheartedly and unreservedly with the men who own and operate these plants in the South.

It has been our belief, beginning with our first issue on March 2, 1911, that a journal has an obligation to render service to the industry with which it is affiliated, and we shall hold fast to that conviction.

It is our hope that you will like this first monthly issue, and your comments will be appreciated.

For Those Who Come After

When a friend of the North Carolina Textile Foundation, Inc., recently called upon the treasurer, and controlling stockholder, of a North Carolina textile mill relative to his mill making a donation, he was greeted with the statement, "I worked hard for my money and I am not going to give any of it to a textile foundation."

The mill treasurer, who made the statement, was for many years a cotton mill overseer and later a superintendent. He was an excellent man in both positions and not only worked hard but managed to save enough money to later acquire considerable stock in a North Carolina mill and to become treasurer of same.

Under his management, the mill has done well and in recent years has made substantial profits.

While he is not an old man, he has reached a mature age and while he can look backward and take pride in the fact that the success he has made was due to his own efforts, he can also think about the days which are to follow his passing and he should have an interest in giving a helping hand to the young men who are to come and be interested in making their path easier.

We do not know the author of the poem, "The Bridge Builder," but it seems to us to express the attitude which should be that of every man of mature age.

An old man going a lone highway
Came to a chasm, deep and gray.
The old man crossed in the twilight dim,
The sullen stream had no fear for him;
But he turned when safe on the other side
and built a bridge to span the tide.
"Old Man," said a fellow-pilgrim near,
"You are wasting your strength with building here;
Your journey will end with the close of the day,
You never again will pass this way;
You've crossed the chasm deep and wide,
Why build you this bridge at evening-tide?"
The builder lifted his old gray head—
"Good friend, in the path I have come," he said,
"There followeth after me today,
A youth whose feet must pass this way.
This chasm that has been as naught to me,
To that fair-haired youth may a pitfall be;
He, too, must cross in the twilight dim;
Good friend, I am building this bridge for him!"

There is, of course, no obligation upon the mill, operated by the treasurer mentioned above, to make a donation to the North Carolina Textile Foundation, Inc., nor is there any obligation upon a South Carolina mill to donate to the J. E. Sirrine Textile Foundation or a Georgia mill to donate to the Educational Foundation of Georgia, but it seems to us that, for the good of the textile industry of the future, it is well to efficiently prepare young men for its operation.

A squirrel has enough sense to store nuts for the winter which he somehow knows is certain to come.

The textile industry is now operating under a summer sun of prosperity but from all the lessons of the past should know that winters of adversity are certain to come.

Men who are large stockholders in textile corporations should, if for no other reason than the future security of their holdings, be interested in making certain that well trained operating executives will be available.

We have been connected with the textile industry of the South since 1898 and can cite instance after instance of mills which were successful while operated by certain men but whose stock became worthless through poor management and inefficient operation after they had passed away.

If for no other reason than to insure a continuation of the value of their investments and an income for their wives and children, those who are large stockholders in textile mills should have a vital interest in educating young men for the future operation of the industry.

It seems to us that making donation to one of the textile foundations constitutes a wise investment for future protection of present investments, especially when much of the amount donated would otherwise go to the government in the form of taxes.

In years past when there were only cotton yarns and plain cotton fabrics, well educated textile operating executives were not nearly as important as they are today in this age of synthetic fibers and blends or will be in the days to come when there will be still more types of synthetic fibers and when more mills will be operating on blends than upon 100 per cent cotton.

We are not much worried today about imports of textiles from other countries but, as they recover from the war, they will begin to manufacture the goods needed to acquire American dollars and our best insurance against such competition is an abundant supply of young operating executives who have been afforded the best textile education which it is possible for them to receive.

Foreign countries will not, for many years, be able to give such a textile education to their young men and our advantage will stand as in good stead.

If for no other reason than the protection of the future of the textile industry of the South and therefore the protection of the money which men and women have invested in textile stocks, mills should be liberal donors to the three textile foundations.

We, however, have an even greater interest in, as the poem says, "A youth whose feet must pass this way."

It has been our good fortune to have an opportunity to play a considerable part in raising funds for the North Carolina Textile Foundation, Inc., and in establishing its policies and plan of operation.

We supported and encouraged the establishment of the J. E. Sirrine Textile Foundation in South Carolina and the Educational Foundation in Georgia and have urged donations to them.

We have the firm conviction that three strong schools of textiles collaborating with each other in the education of young men and in the development of practical research will mean much to the future of the textile industry of the South.

The mill treasurer, a former mill overseer and superintendent who came up the hard way, is a public-spirited man and we feel certain that he is interested in giving the young men who are to follow him the best possible chance in life.

He had not thought the situation through when he said, "I worked hard for my money and I am not going to give any of it to a textile foundation."

Seeking To Avoid The Sales Tax

We note the following in a recent issue of a Richmond, Va., newspaper:

> Governor Tuck wrapped up a $14,000,000 per year tax-increase program, including rises in individual and corporate income levies, and presented it recently to the Virginia General Assembly as the keystone of his biennial message on affairs of the Commonwealth.
>
> The extra money, he told members of the Senate and House of Delegates, is necessary if the state is to meet its "continuing responsibilities" in such fields of public sevrices as education, health and welfare.
>
> It did not, however, include any sales taxes—and Mr. Tuck said firmly that "I am opposed to the sales tax, except as a last resort."

Some of the industries which have selected Virginia for their location because of low taxation will be interested in Governor Tuck's proposal to increase their taxes, including corporate income levies.

North Carolina is in a comfortable financial position because of a three per cent tax upon the sale of all articles except a few basic foods and has no need to increase corporate income levies.

Governor Tuck says that he is opposed to a sales tax but in North Carolina the sales tax is a closed subject because it has been tried for a number of years and is now recognized as a fair and equitable method of taxation.

Other Textile Manufacturers Visit Japan

Noting that a group of textile manufacturers, headed by W. P. Jacobs, president of the American Cotton Manufacturers Association, has left the United States for a visit to Japan, we are reminded of a visit by a similar group a short time before the Pearl Harbor incident.

When the former group returned they made many speeches about the fine treatment they received and the friendliness of the Japanese, but almost before the addresses ceased the Japanese had launched their sneak attack.

We have an idea that the present group will remember the chagrin of the others and be more cautious.

TEXTILE INDUSTRY SCHEDULE

Jan. 30—Annual forum and dinner, **ASSOCIATION OF COTTON TEXTILE MERCHANTS OF NEW YORK,** Ritz-Carlton Hotel, New York City.

Feb. 2-6—Annual **INTERNATIONAL HEATING AND VENTILATING EXPOSITION,** Grand Central Plaza, New York City.

Feb. 7—PIEDMONT SECTION, AMERICAN ASSOCIATION OF TEXTILE CHEMISTS AND COLORISTS, Poinsett Hotel, Greenville, S. C.

March 7-9—Ninth annual **SOUTHERN SAFETY CONFERENCE,** Birmingham, Ala.

March 15-19—AMERICAN SOCIETY OF TOOL ENGINEERS' INDUSTRIAL EXPOSITION, Public Auditorium, Cleveland, Ohio.

April 2-3—Annual convention, **ALABAMA COTTON MANUFACTURERS ASSOCIATION,** Hotel Beuna Vista, Biloxi, Miss.

April 3—PIEDMONT SECTION, AMERICAN ASSOCIATION OF TEXTILE CHEMISTS AND COLORISTS, Robert E. Lee Hotel, Winston-Salem, N. C.

April 3—SOUTH CAROLINA DIVISION, SOUTHERN TEXTILE ASSOCIATION, Parker High School, Greenville, S. C.

April 5-8—Third **SOUTHERN MACHINERY AND METALS EXPOSITION,** Atlanta (Ga.) Municipal Auditorium.

April 10—PIEDMONT DIVISION, SOUTHERN TEXTILE ASSOCIATION (includes former Gaston County Division), Charlotte, N. C.

April 17—NORTHERN NORTH CAROLINA-VIRGINIA DIVISION, SOUTHERN TEXTILE ASSOCIATION, site of meeting to be selected.

April 24—EASTERN CAROLINA DIVISION, SOUTHERN TEXTILE ASSOCIATION, N. C. State College School of Textiles, Raleigh.

April 29-30, May 1—Annual convention, **AMERICAN COTTON SHIPPERS ASSOCIATION,** Dallas, Tex.

May 3-7—INTERNATIONAL EXPOSITION OF TEXTILE MACHINERY, EQUIPMENT AND SUPPLIES, 71st Regiment Armory, 34th Street at Park Avenue, New York City.

May 10-14—Third annual NATIONAL TEXTILE SEMINAR, Shawnee Inn, Shawnee-on-Delaware, Pa.

May 13-15—Annual convention, **SOUTHERN TEXTILE ASSOCIATION,** Ocean Forest Hotel, Myrtle Beach, S. C.

May 20-21—Annual meeting, **SOCIETY OF PLASTICS INDUSTRY,** Atlantic City, N. J.

May 27-29—Annual convention, **TUFTED TEXTILE MANUFACTURERS ASSOCIATION,** Sheraton-Plaza Hotel, Daytona Beach, Fla.

June 18—PIEDMONT SECTION, AMERICAN ASSOCIATION OF TEXTILE CHEMISTS AND COLORISTS, Ocean Forest Hotel, Myrtle Beach, S. C.

Sept. 27-Oct. 2—Third **NATIONAL PLASTICS EXPOSITION,** Grand Central Palace, New York, N. Y.

Oct. 4-9—15th **SOUTHERN TEXTILE EXHIBITION,** Textile Hall, Greenville, S. C.

Oct. 20-23—Annual convention, **AMERICAN ASSOCIATION OF TEXTILE CHEMISTS AND COLORISTS,** Sheraton-Bon Air Hotel, Augusta, Ga.

WHAT OTHERS ARE SAYING

Commonplace Miracles

THE world is full of wonders that seem unimportant, and yet, without them there could be no life on this earth of ours.

Thus, the earth revolves once every 24 hours, and turns at the rate of about 1,000 miles an hour. If it turned at the rate of only 100 miles an hour days and nights would be ten times as long as they now are. As a result we would have ten times as much sunlight every day and everything would burn up; the nights would be ten times as long and everything would freeze to death before daylight brought the warm sun again.

By making the earth turn at 1,000 miles an hour instead of only 100 miles an hour, God made it possible to have life on earth.

There are marvels just as miraculous in the life of man. For example, if ever men stopped trading with each other, every man would have to make everything he needs for himself, and civilization would sink back thousands of years.

The fact that men exchange goods and services with each other makes it possible to have division and specialization of labor, tools and machines that multiply by more than 50 times the ability of man to produce goods. That is why America has the highest standard of living in the world.

But the miracle that makes it possible is the simple fact that both parties to an exchange profit by the transaction. If ever the profit is all on one side men will stop exchanging, and civilization will move back over the centuries that separate us from the primitive savage.

Both the buyer and the seller make a profit on the same transaction, because each gives up less than he gets in exchange for it. What makes any article worth more or less is our attitude toward it. Thus, a glass of water is a glass of water, and a hamburger sandwich is a hamburger sandwich.

But if I am thirsty and you are not, the identical glass of water is worth more to me than it is to you. If you are hungry and I am not, the same hamburger sandwich is worth more to you than it is to me.

So, if I give you a hamburger sandwich in exchange for a glass of water from you, each of us is giving up less than he gets, and we both make a profit from the transaction.

That is why one of the worst things that could happen to the world would be to make us all alike. Because we are different and have different ideas of what is good and bad, or what is worth more and what is worth less, we can trade goods and services with each other and all of us profit by doing so.

That is why the profit motive is indispensable to civilization. — ALFRED P. HAAKE, PH. D., in *Link-Belt News.*

Causes of High Prices

THERE has been much to-do in the public press about the activities of the Department of Justice, under Attorney General Tom Clark, in seeking indictments against various firms and industries because of high prices. Accusations have been directed against rubber manufacturers, steelmakers, railroads, oil refineries, manufacturers of color films and brake linings. Even real estate agents have been included.

One of the unfortunate aspects of such a situation is that the public too often is prone to judge the accused guilty without knowing the facts in the case and without realizing what the real motives behind the accusation may be. Some years ago, for instance, one of our largest industrial firms was indicted on 140 different counts. The company was forced to spend millions of dollars and many, many months in defending itself. It was exonerated on all but one of the 140 counts, and even that lone charge was finally rendered untenable by the government's own actions. In the meantime, however, the company had suffered unfairly because many people had assumed it guilty and perhaps never did learn of its vindication.

No one will deny that prices today are high. But the blame should be placed where it belongs, and investigations designed to disclose the reasons for our high prices should be completely and entirely free of political motives. It is an old political trick, when the voters complain, for politicians to provide the public with a scapegoat upon whom they may vent their wrath and thus protect themselves. It may be "practical" politics, but such a course cannot be justified from any moral standpoint.

There are many reasons for today's high prices. Perhaps the most important factor is the wave of wage rises since the end of the war. Wages paid to produce a product are almost invariably the principal factor in determing the price at which the product can be sold, so it follows that the higher the wages paid, the higher the price of the product must be. As wages have risen, so inevitably has the cost of living, and many people blame the Truman Administration for high living costs because it unwisely and unrealistically stated that higher wages could be paid without a corresponding increase in prices.

Unbusinesslike government buying policies—particularly in corn and other grains—have contributed to sending the prices for foodstuffs higher. Speculators have known in advance the government's purchasing plans, and with the gamble thus removed, have been quick to take advantage. And the resulting higher prices for corn, wheat and other grains have in turn raised the price of meat and poultry, for they are an important item in feeding livestock.

There are other factors contributing to today's high prices. Heavy demand from foreign countries devastated by the war has competed for available supplies. With employment and income at an all-time high, more people can afford more and better things, and with this heavier demand unmatched by correspondingly greater production, prices are bound to rise.

Even the huge federal payroll plays a most important part in our high prices. In 1939 there were 970,000 employees on the federal payroll. Today there are 2,000,000. Federal expenditures have jumped from $8,800,000,000 in 1938-39 to a prospective budget of $35,000,000,000 in 1948-49. Large government expenditures mean high taxes, and since taxes are an inseparable part of the cost of a product, higher taxes compel higher prices.

But this, of course, is never a popular subject with politicians. It is easier and more "practical" to try to make someone else the scapegoat.—GRAHAM PATTERSON, publisher, *Pathfinder News Magazine.*

YOUR CARDS
Asset or Liability?

Photo by Ewing Galloway

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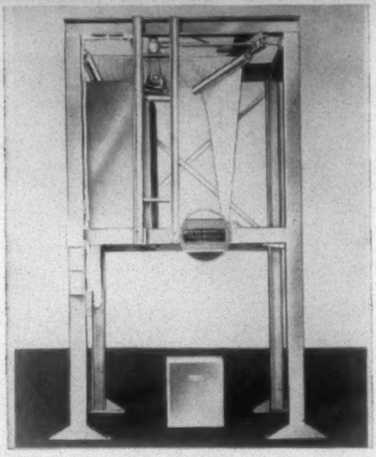

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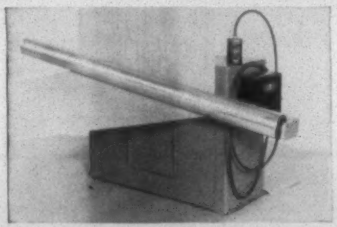

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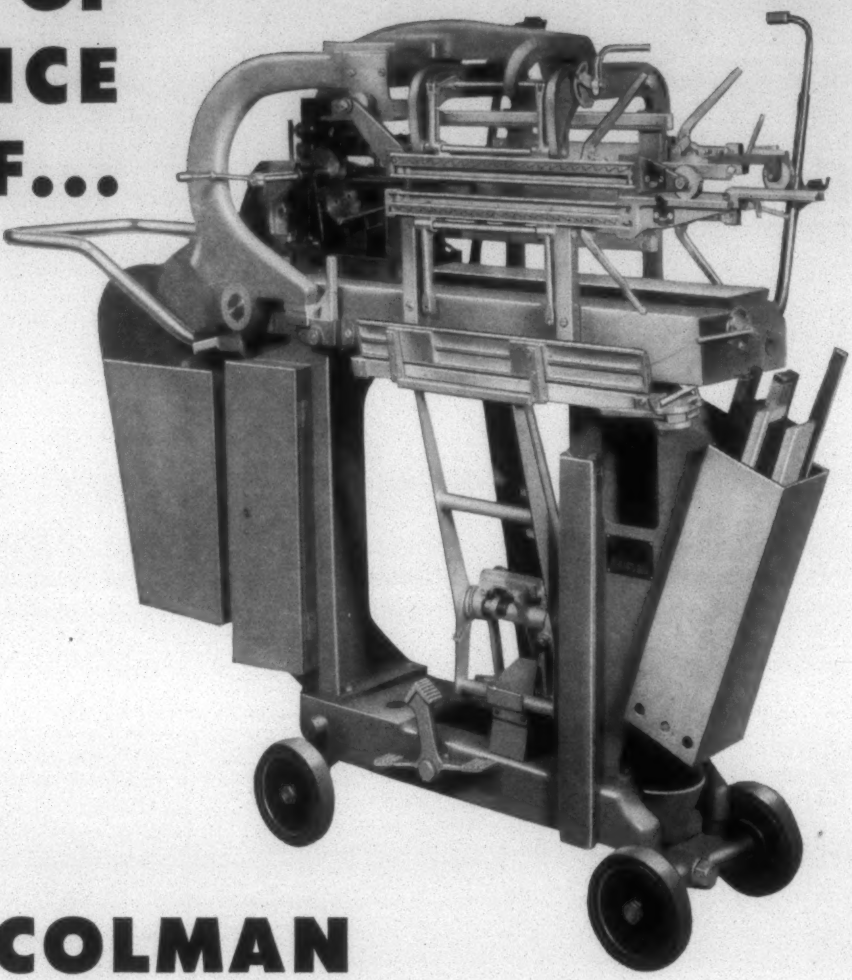

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Textile Research Achievements In 1947

By JULIUS B. GOLDBERG, Research Director, J. P. Stevens & Co., Inc.

— Before American Association of Textile Technologists —

CONTRARY to the belief held by some practical mill men that research achievements in the field of textiles during the past year have been of minor importance, one finds, in retrospect, a vast number of developments which are positive evidence of the textile industry's ability to make technological advances in step with other major industries.

Perhaps the fault lies in the layman's conception of research as being some mysterious force which makes money disappear in laboratory test tubes, emerging as a new project for future study using bigger and better test tubes. Since research includes all investigations in every branch of science and engineering to develop new products and methods or to improve existing ones, it is evident that the field is enormous. The changing of shape of a shuttle or the design of a radically new finishing range can truly be designated as the results of research.

In considering the more noteworthy accomplishments of 1947, it is significant that over 150 announcements of new or improved products, processes and equipment were published during the year, matched by about an equal number of United States patents issued on items directly associated with the textile industry. For convenience this review is presented in the following categories: (1) new fibers and yarns; (2) manufacturing methods and equipment; (3) dyeing and finishing products and operations; and (4) laboratory instruments and techniques.

Synthetics

Apart from the introduction of Vinyon N and laboratory yields of yarns derived from eggs, chicken feathers or the very versatile corn which we eat and sometimes drink, there were no new synthetic fibers introduced for textile use during 1947.

At one of the British Textile Institute meetings it was announced that wool waste had been successfully dissolved and regenerated as a new fiber. This technique is not novel, similar practice having been employed in Japan on real silk waste years ago, but the end products left much to be desired in the attempt to stimulate the natural protein fibers.

Domestic laboratory tests were published on the Italian Piumital, an animalized viscose containing protein derived from chicken feathers. Here again there is a lack of novelty, for modified viscose type yarns have been known for some time, as for example, Courtauld's Rayolanda or the pre-war Italian Cisalfa or Afcasene. The synthesis of giant protein molecules by research workers at Harvard University stimulated the imagination of more newspaper science editors than textile scientists in predicting the use of similar technique to manufacture new fibers.

Further progress was reported in the pilot plant manufacture of a peanut protein fiber, Vicara, by the Virginia-Carolina Chemical Co.; similarly in the Drackett Co.'s soy bean fiber, in Vinyon N with improved heat resistance, and in the Du Pont Co.'s newer offsprings, Fiber A, polymethacrylonitrile and Fiber V, said to be the equivalent of the Imperial Chemical Co.'s Terylene, announced in 1946. Sample lots of Saran staple fiber were offered for experimental purposes. American Viscose Corp. went into regular production of a permanently crimped viscose staple fiber, and the Hartford Rayon Corp. introduced Featheray, a bulky, hollow-filament type viscose yarn. A Cleveland chemist, J. W. Yanda, claimed that by his process of treatment with special resins, new properties could be given to fiber, roving or yarns, increasing their usefulness. Almost simultaneously with the report of an English firm of the presentation of a range of woolen and worsted fabrics with fine yarns spun around a core of filament nylon came the announcement of a North Carolina mill to the effect that it had been producing similar yarns for the past year. A few weeks ago, a New York yarn dealer and throwster announced that he had developed a process for imparting a coiled appearance to nylon yarn by mechanical and chemical treatment, yielding an elastic yarn suitable for weaving and knitting.

Novel machinery for the manufacture of viscose rayon yarn was described by Dobson and Barlow, the English builders of this equipment for the Nelson continuous spinning process, with American rights controlled by the Verney Corp. In this country, a Philadelphia engineer has outlined a continuous process featuring great savings in space, investment cost, chemicals and water. An auotmatic rayon spinning machine exhibited in Moscow was said to produce rayon yarn in five minutes from the time of the addition of a "special solution."

Among the more interesting patents issued relating to synthetics were those covering the production of crimped viscose rayon, the use of infra-red heat in spinning operations, the extrusion of hollow filament vinyl yarns, the production of colored glass fibers, the wet spinning of cellulose acetate rayon, and the spinning of yarns of two or more components, giving novel laminated or core-yarn effects.

Natural Fibers

In the field of vegetable fibers, there has been little innovation to arouse more than passing interest. A British cotton expert has tested the planting of colored cotton in Egypt, which brings to mind the raising of colored cotton, and not all red, in Russia. The Syrian milkweed plant fiber in lengths up to two inches was considered useful for blending with other fibers, and in France plans were revealed for developing broom fiber for use alone or in blends. Ramie continued to break into print at irregular intervals, but actual poundage of this textile fiber used in the United States was negligible. A new piece of equipment, the Siland combine decorticator, with greatly increased capacity for stripping the ramie fiber, was to be ready for field tests in Florida early this year.

Fiber and Yarn Processing

The Model L Whitin card offered many improvements in bearing lubrications, interchangeable parts and in coiler and flat top motion drives. Disclosure was made of features of the Saco-Lowell 2-for-1 twister, still in the experimental stage. This twister shows promise of permitting the production of higher quality yarn at two-thirds saving in power cost. Drafting without rolls can be accomplished on a machine invented by the U. S. Rubber Co., using intermittently operating dogs and stops. New type cotton machinery designed by the Fiber Products Laboratories, Inc., of Newark, N. J., is made up of five units which occupy only 240 square feet of floor space and can process 500 pounds of cotton per hour into a uniform lap, eliminating cleaning operation of the card. Quite recently the English trade journals published details of the Ferranti electronic yarn breakage detector for use in yarn spinning or other textile manufacturing operations.

Limited production of a combination fiber breaking, drafting, roving, intermediate and spinning frame for handling continuous filament rayon tow was announced by Medley Mfg. Co. A newly designed separator and spindle adaptor in use at Joanna Textile Mills Co. reduced jerky traveler motion and cut doffing time in half. Avondale Mills reported the development of hot air type slasher with high heat economy and efficiency as outstanding advantages. The tension compensator, an inexpensive self-contained unit designed to produce a constant output tension in winding, spinning or twisting, was introduced late in the year by Walter Kidde & Co.

A new one-cylinder woolen card was said to effect economies in reduced power consumption, fly waste and maintenance, and simplified stripping. Improved wool yarn quality is claimed through use of the Perkins fiber conditioner, a machine for applying a drafting action to reduce wool to a fine web and disintegrating foreign matter through the use of two pairs of extender rolls. A different type of burr-crusher, the Burrcoa, depends on two separate crusher rolls operating in contact with a single center roll. The manufacture of the Hartmenn card, a German-type machine, for the Forstmann Woolen Co. was reported to be under way by the Newport News Shipbuilding and Drydock Co. Only last month another newcomer in the texitile machinery field, the McGlynn Hayes Industries, Inc., introduced an improved worsted spinning frame for yarns ranging from 10s to 90s.

Knitting and Weaving

Whitin offered a new 168-inch tricot knitting machine with greatly increased speed of operation, and Aveco added a table model tricot machine. Further details regarding the Swiss Sulzer shuttleless weaving machine were revealed by Warner and Swasey, engaged in building this revolutionary "loom" for use in America.

Three machines by Zellweger, Ltd., of Switzerland were exhibited in this country. They were the Little Uster portable automatic warp tying machine, operating at from 200 to 300 knots per minute, and automatic reaching-in and denting machines. The reeding machine permits one operation to pass the warp ends through the droppers and harness, and when used with the denting machine the yarns are drawn in automatically from the denting blade. It is said to be suitable for reeds as fine as 150 dents per inch.

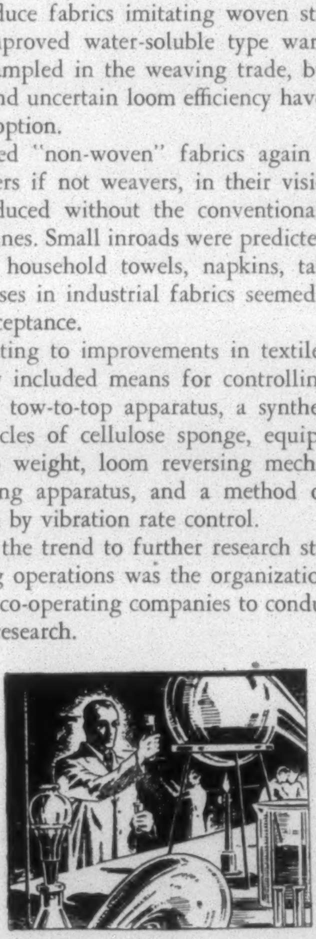
Foreign activity on loom design centered about new French shuttle-changing and circular looms, an English sample weaving machine, a new Belgium type novel let-off and shed motion, and the improved models of Jaegglie rayon looms. An English circular knit machine featured the ability to produce fabrics imitating woven structure.

New or improved water-soluble type warp sizing materials were sampled in the weaving trade, but the factors of high cost and uncertain loom efficiency have held up any large-scale adoption.

The so-called "non-woven" fabrics again captured the fancy of writers if not weavers, in their visions of textile materials produced without the conventional weaving or knitting machines. Small inroads were predicted in the fields of disposable household towels, napkins, tablecloths and diapers, but uses in industrial fabrics seemed to be receiving greater acceptance.

Patents relating to improvements in textile manufacturing machinery included means for controlling loom warp beam tension, tow-to-top apparatus, a synthetic cot incorporating particles of cellulose sponge, equipment to control card web weight, loom reversing mechanism, textile bobbin marking apparatus, and a method of controlling thread tension by vibration rate control.

Notable in the trend to further research study of textile manufacturing operations was the organization in England of a group of co-operating companies to conduct long-range fundamental research.



Dyestuffs and Finishes

Although no revolutionary new dyestuffs were marketed, current intensive study of application methods and the surface characteristics of fibers points to better understanding of the dyeing process.

Not to be outdone by the famous Irium which adds to a certain toothpaste's whitening power, if not to the radio listener's pleasure, the use of a fluorescent type dyestuff which gives more brilliant white effects on cotton or rayon fabrics was extended to the ultimate consumer's household by its incorporation in one of the popular domestic detergents. Adding to the attractiveness of what is left of the modern young lady's swim suit, a California manufacturer announced the Coldfire process for the application of colors to synthetic fabrics used for such apparel, giving up to ten times the normal brilliance and increased visibility at great distances. This was apparently a natural outgrowth of the use of fluorescent dyed acetate fabrics by the Signal Corps during the war. The figures in the suits are still probably a more important factor in stimulating attention than are the suits' sales figures. In considering comfort of summer clothing, a report on a study of garments concluded that those whose colors afforded high radiant energy reflectance were substantially cooler than those with low reflectance.

Women may have been responsible for the popularity of two-tone color effects on automobiles, but with due apologies to a song lyric of the '30s, they still object to the changing of the complexion of their acetate dresses from blue to rosey red. This gas fading problem continued to receive attention by dyestuff and chemical manufatcurers who offered some improvement in new inhibitors to be applied in finishing.

Spurred by the passage of the California Inflammable Fabrics Act, as well as by pending federal legislation, several finishers announced flame-resistant finishes with varying degrees of durability. In addition, there were numerous flameproofing patents issued during the year covering products and processes. The widespread use of mothproofing compounds by the woolen goods weaving and knitting mills seems to be retarded by lack of consumer demand, or by the industry's traditional acceptance of responsibility for providing nourishment to moths.

Crease-resistance of certain cotton fabrics by the use of a melamine formaldehyde resin was announced as an accomplishment of the Dan River Mills. Actual production was still limited at the close of the year, but retail promotions of tweed-type cottons, rainwear, and ginghams were scheduled for the early months of 1948.

Shrinkage Control

In keeping with the trend to give the consumer washable fabrics which would not shrink, stretch or felt during ordinary laundering operations, shrinkage control of both rayon and wool fabrics was spotlighted continuously. Melamine formaldehyde resins and theremoplastic rubber-type dispersions were promoted for use on woolen goods in competition with several of the wet chlorination processes. In the hosiery field, shrink-resistant men's socks showed every sign of receiving broad acceptance by both manufacturers and the consumers who apparently want to be relieved of the ever-tightening toe-hold of shrinkage socks as well as the old familiar strangle hold of shrinking shirt collars.

On all rayon fabrics, the Cluett, Peabody Sanforset process, introduced in 1946, continued to make the biggest headlines and perhaps the biggest headway. Claiming applicability to cotton mixtures as well as to all rayon fabrics, Alrose Chemical Co. added the Definized G glyoxal process to its earlier introduced Definized caustic soda treatment, and other companies began to exploit the use of ketone aldehydes, similar to the British Imperial Chemical Co. acetone formaldehyde treatment. It is interesting to note that a British patent was issued to Cluett, Peabody and Co. on the use of glyoxal to effect crease-resistance in rayon fabrics.

Processes and Equipment

Of interest to a small segment of the industry was the new Electro-Screenprinter, capable of printing up to 15 colors in one operation with patterns up to 75 inches, and the General Aniline and Film Corp. photo-print process. The latter utilizes a photographic negative and fabric treated with light sensitive dyes. One Rhode Island finisher announced a method which permitted the application of three-dimensional photographic scenes on all fabrics except acetate. The opportunity for loyal fans to nestle their cheeks on the bigger than life-size photographs of their favorite crooner or movie star reproduced on pillow cases was regarded as a notable achievement by one of the big weekly magazines not so long ago. Furter simplification of mechanical screen printing equipment was claimed by a Swedish firm which developed means of moving stencils on a track from moveable shelves, eliminating the use of long tables.

In the plain dyeing field, the use of a low-melting alloy, Cerobend, to exert pressure in the dyeing with colloidal colors received several press notices, but no domestic company was revealed as actively engaged in experimenting with this technique. A similar method, patented in Germany, used a liquid metal bath with electrical heating.

Proctor and Schwartz, Inc., developed a suction-type vacuum dryer which, when tried out at the American Viscose Corp. textile unit in Marcus Hook, was found to reduce drying time and afford one-man operation on tricot, circular knit or open-width woven goods. If success is achieved by the Redman knit goods shrinkage machine, the "old look" of baggy underwear may soon be superceded by a new, ever form-fitting look. Sponsored by the Underwear Institute, this invention is being further explored in a large scale machine being assembled in a dye works near Philadelphia.

Plissele was a new finish patented and offered by the Apponaug Co., using thermo-setting resin to obtain a variety of novel effects on all types of celluloisic fabrics.

Subjecting textiles to the "shakes" without alcoholic stimulus is a new technique recently called to the textile scientist's attention. One of the patents issued during the year covered the use of high frequency vibration applied to dye baths as an aid to dyestuff penetration. Some information was also disclosed on the use of high frequency in baths to aid in soil removal, and preliminary research indicated that ultrasonic dirt removal might even be accomplished in air rather than in liquid baths.

In England, a novel use was suggested for Positex, the positively charged rubber latex presented late in 1946 and recommended for imparting tensile strength to wool fibers and for improving wear resistance. By printnig patterns with this material and subsequently napping the goods, embossed effects were obtained.

Laboratory Instruments and Techniques

A number of yarn evenness testers were developed during the year, though few were made available for general distribution. The Uster, made by Zellweger, Ltd., of Switzerland, was offered for sale in this country, but no deliveries were expected before the latter part of 1948. The Diamatrol, a continuous indicating electronic micrometer, was exhibited at the Textile Research Institute annual meeting in November, and the first model of another instrument made by a New Jersey engineering firm was delivered to a mill for trial at about the same time. The outcome of a long period of intensive research and development by a private textile research organization, still another instrument, capable of measuring and recording yarn evenness at winding speeds, was completed last year. As the result of collaboration with the West Point Mfg. Co. research division, the Sheffield Corp. presented the Micronaire, a precision instrument for determining fiber fineness in a few minutes through air flow measurements. The lowly pick counter was more than glamorized in a new version of an electronic pick counter originally introduced by a Massachusetts engineering firm several years ago. In a paper presented at the Electron Microscope Society only last month, the use of the electron microscope was described in making observations of physical and chemical damage to wool fibers.

A particularly interesting report appeared on the results of a study of various water repellency testers, and a description was given of the Slowinske Raintester which showed promise of yielding good correlation with the Philadelphia Q. M. Deport rain room results on garments. For the determination of moisture in textiles an English concern announced a new type of electronic hygrometer and in this country the Steinlite Moisture Meter, depending on change in electrical impedance, was found to be extremely sensitive in tests conducted at the Textile Research Institute. Another piece of laboratory equipment made available for rapid moisture determinations on bulk fiber was the Baird Associates forced draft dryer.

Displayed above is 50-50 blend of Avisco crimped rayon and virgin wool, which now goes into Pepperell Mfg. Co. Glolon blankets. According to W. W. Rawlinson, superintendent of Pepperell's blanket division, the American Viscose Corp. crimped rayon blends much better with wool on the woolen cards than standard rayon. "It enables us to obtain a much better rub on the tape condenser with a fuller, rounder roving," Mr. Rawlinson states. "We have less end breakage at the cards and consequently, less ends down on our twisting frames as against our experience when using the straight type fibers. Our finished blanket tends to have a loftier appearance with a nicer, fuller feel and greater resiliency and our loss in napping seems to be less due to the fact that the crimp in the fibers seems to have a tendency to prevent same from being removed from the blanket during the napping operation."

Abrasion testing received its share of attention in the news with the introduction of a new type of apparatus designed and built at the Bureau of Standards. Preliminary restricted reports of the Philadelphia Q. M. Textile Research Laboratory showed definite progress in the comprehensive study of textile wear-resistance and the relationship of laboratory fabric tests to field tests on garments. Considerable interest in this vexing problem was also revived in a special group of members of Committee D-13 of the American Society of Testing Materials.

As a direct outgrowth of legislation enacted and pending on textile fabrics flammability, a new tester was designed under the sponsorship of the research committee of the American Association of Textile Chemists and Colorists. Another instrument of the Bureau of Standards design was also being investigated for possible adoption as an industry standard.

For speedy preparation of samples for determining yarn size or breaking strength, Alfred Suter exhibited a new motor-driven ten-skein yarn reel. With no slur intended on the appearance or hand of some of our textile fabrics, the Osmometer was offered by the U. S. Testing Co. as an instrument designed to measure and classify accurately the strength of all types of odors. The Saxl tension meter for checking yarn tensions was announced as an aid for increased production and improved quality.

Means of measuring the frictional properties of wool and other fibers was described in publications of the British Textile Institute, and practical applications were indicated in connection with the study of shrink-resistant and anti-felting treatments of wool. A research associate of a foreign rayon producer reported on the use of the Vibrascope and the Hiem pendulum tester for single fiber testing, and a number of the Sookne-Harris Fiber Extensometers for fiber load-elongation measurements were marketed for the first time by Harris Instruments, Inc. The first commercial model of the Instron inertia-free, electric strain gauge tensile strength tester was delivered to the laboratories of the Textile Research Institute a few months ago. Quite a different technique for measuring fiber and yarn elastic properties is employed in the Pulse Propagation Meter recently developed by the Fabric Research Laboratories, Inc.

Fresh emphasis was placed on the use of two familiar pieces of apparatus for research study of textile machines in operation, namely, the Strobolite high intensity flash equipment and the cathode ray oscillograph.

The old problem of measuring the ability of textile fabrics to recover from creasing was again brought to attention by the marketing of a new instrument, the Wrinkle Recovery Tester by the Monsanto Chemical Co. A novel hosiery snag resistance tester, designed by Du Pont scientists, made its appearance earlier in the year.

Patents on testing instruments issued during the past year included those describing a device to detect rayon yarn irregularities, and one enabling the measurement and registering of static accumulating properties of fibers.

Large additions have been made to the staffs at the Institute of Textile Technology, the Textile Research Institute and Textile Foundation, and the British Shirley Institute. With due respect to the English *Journal of the Textile Institute,* which has earned world-wide recognition for its outstanding quality, the *Textile Research Journal* of the Textile Research Institute and the *Textile Technology Digest* of the Institute of Textile Technology are deserving of commendation for their ever increasing value to our industry's scientists.

Great strides were reported in the raising of funds for American textile schools and the several foundations, and the teaching staffs and facilities of all were appreciably strengthened. Among the new larger research laboratories established during the year were those of the Deering Milliken Research Trust in Connecticut, and the Celanese Corp. of America in New Jersey. Advancement on all frontiers of research was made by the many federal and state agencies, as well as by the educational institutions especially equipped for such study.

The Textile Research Institute and Textile Foundation reported progress in continuing studies of the effect of sizes on yarn resilience, the measurement of chemical and physical damage to fibers, mechanical properties of fibers, cellulose and starch properties, and moisture absorption and swelling of fibers. Projects carried on at the Institute of Textile Technology included general research on warp sizing, studies of stream sanitation and pollution, synthesis and evaluation of dyes, biological deterioration of textiles, detergency and aerodynamic opening and cleaning of cotton. The research committee of the American Association of Textile Chemists and Colorists concentrated its efforts on problems pertaining to dyestuff fastness to washing and light, detergency, fabric deterioration and dimensional changes of textiles.

In Australia the Council for Scientific and Industrial Research announced investigations continuing on the structure of wool fiber and its frictional properties and the potential commercial use of wool wax.

Looking Ahead

As one who has long maintained that the most misinformed people in the country are those who rely on what is printed in our provocative pocket-sized periodicals and the predictions of some of our world-famous radio commentators, I hesitate to record my version of events to come as the fruits of textile research. Like the radio commentators, perhaps if I mention many and just a few appear timidly on the scene, the false rumors will be overlooked.

In the field of dyeing, it is reasonably certain that there will soon be acetate dyestuffs which no longer blush at the sight of atmospheric gases. Some may show slight changes in depth of shade, but there will be a definite improvement over many previously used dyestuffs. Others may incorporate inhibitors to accomplish the same resistance to change of shade, eliminating the need for an extra treatment by the dyer. Also in acetate dyeing, further commercial application of vat dyestuffs without saponification is to be expected.

Wool shrinkage control processes will probably be more greatly publicized and developed. The chlorination type methods may have an edge over the resin treatments from the standpoint of ease of application and cost.

If wood pulp cellulose continues to rise in price, there is some chance that rayon manufacturers will find available a new source of cellulose at a lower cost. Short-cut methods for preparing a viscose solution ready for spinning may also be a practical means of cutting production costs.

Multifilament vinylidene chloride yarns are making their appearance in small quantities for further development by the weaving trade, and industrial users of some of the high-polymer yarns will find increased yarn production a stimulus to expanded uses. Polystyrene fibers are likely to emerge from the laboratory stages within a year or so.

In the equipment field, it is probable that more consideration will be given to hot air slashers. Progress may also be expected in machinery improvements to handle longer wool fiber by the American system, in gilling operations, and in blending equipment.

For the measurement and control of roving and yarn evenness we may look forward to seeing some ingenious pneumatically operated equipment.

With plans announced by the International Harvester Co. to manufacture 1,500 additional spindle type cotton pickers, it is anticipated that the mechanization of cotton harvesting will show more rapid gains in the coming year. Russian textile engineers have recently announced the development of similar equipment which they claim is even superior to the American models.

In conclusion, it is evident that there has been a considerable amount of progress throughout the textile industry which should be credited to the skill and perseverance of the research worker behind the scenes, whether he be the long-haired Ph. D. scientist, or the self-educated visionary practical mill man with a great idea.

U. S. S. R. Claims Big Textile Increase

The Soviet Union, according to I. K. Sedin, minister of the textile industry, has shown remarkable progress in textile output in 1947. Greater things are expected in 1948.

As compared with 1946 when the production rise was 17 per cent for cotton textiles, 29 per cent for woolen cloth and 35 per cent for silks, the correspondent tentative figures for this year are:

	Per Cent
Cotton textiles	32
Woolen cloths	32
Silks	38

Sedin said the country's textile industry made more big gains following the revolution, particularly during the period of the pre-war Stalin five-year plans when it reached a high stage of development. He said that in 1940, 1,600,000 more meters of fabrics were manufactured than in 1913, a more than 50 per cent increase in per capita production.

Further development was interrupted during the war, as a result of which the industry suffered a major setback. The Germans wrecked more than 400 textile mills and over 2,000 dwellings and other buildings belonging to the enterprises. This considerably curtailed production capacity in the industry.

Next year's targets, according to Sedin, include a no less than 30 per cent increase in fine woolens and coat and suit fabrics and a big rise in production of artificial fiber that will make it possible to increase the output of rayon fabrics by more than 10,000,000 meters.

Loom houses, built by early colonial plantation owners in the South who employed their neighbors at spinning and weaving cloth, were the forerunners of today's modern cotton mills.

Opening, Picking, Carding & Spinning

Metallic Or Flexible Wire Card Clothing

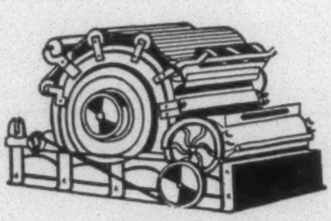
By ROBERT Z. WALKER

THE controversy over the relative merits of metallic card clothing over the flexible wire fillet, and vice-versa, seems to come up every few years. This discussion has been pending for years and there is a wide difference of opinion which keeps the debate of general interest.

There are few places in the cotton mill where two such varied types of materials can be used for the same purpose. The differences between the two are not so great in regard to the action of the wire on the fibers being processed as to the application and maintenance of the clothing. In these respects the variances between the two are wide and marked.

Metallic clothing is formed by cutting teeth into a continuous length of steel tape in much the same manner as the standard lickerin covering. The flexible wire clothing is composed of hardened steel wire needles set into a foundation of closely woven fabric. The individual teeth of metallic clothing are in the shape of a saw tooth while the needles of flexible wire clothing are made of round wire, ground to a point.

Generally, the foundation for flexible card fillet is made of a layer of cotton cloth, then a layer of woolen cloth, followed by two more layers of cotton fabric. Sometimes a layer of linen is substituted for one layer of cotton in order to give more strength. Also, these fabrics are of very close weave as this provides necessary strength and serves as a strong anchor for the base of the needles.



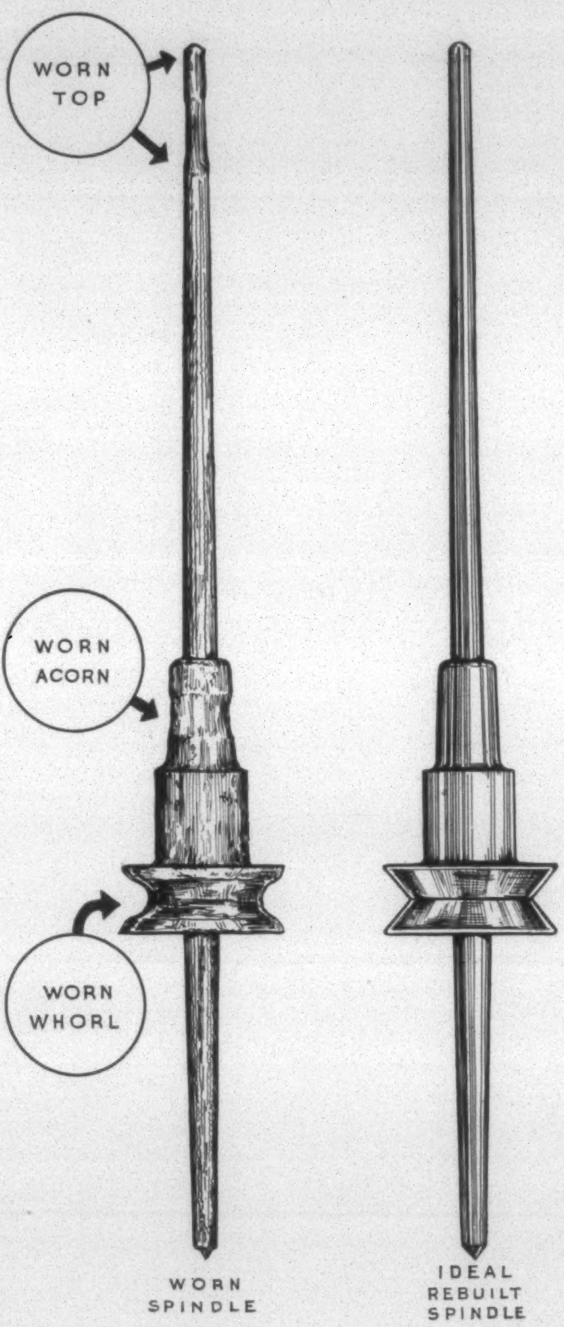
The base is made up of different fabrics because of the varied qualities that are inherent in the types of fibers used. The clothing of a card is subjected to a great strain; yet it must last for at least ten years or more. First of all, the fillet must not be composed of fabrics that will stretch. When the clothing is drawn on the card it is put under a strain of approximately 400 pounds pressure. This pressure is necessary to assure that all of the stretch is taken from it, so that it will lay close to the cylinder at all points and will not become loose and bulge at a later date. The cotton and linen fabrics that are part of the foundation are designed to resist the greater part of the strain, and are woven to withstand any pressure that would cause stretching.

At the same time the needles must not be held so firmly that there is a restriction on the movement of the ends of the needles. This movement is necessary if the correct carding action is to be imparted to them. The base must be formed so that the needles will have the required freedom of movement without the danger of having the needles wear holes in the fabric. If such small holes are worn in the foundation, the needles will not be held upright but instead will be bent in the line of least resistance. Correct carding cannot be done if the wire is in this condition. The layer of woolen fabric allows the needles to move within a small arc without the danger of their becoming loose and unable to grip the fibers properly.

The needles are of hardened steel wire, with a smooth finish and a high temper. Before the card is put into production the needles are ground in such a manner as to accomplish three important requirements. First, the wire is ground from side to side by special type of grinder so that the sides of the needles will be tapered from below the knee to the point. Then the fillet is ground by a traversing grinder so that every point of the needles will be of the same height. This is necessary in setting the card properly. The tips of the needles must be of the same height if the carding action is to be uniform at all points of the cylinder. After this, the wire is given a light grinding with a traverse grinder so that the points of the needles will have a chisel-shaped point. The sharp point is necessary to hold the fibers at the top of the wire where they can be combed by passing under the flats. If the points are not sharp, the fibers will slide down between the individual wires and will cause the card to become loaded.

It is not necessary to grind metallic clothing. In fact, it is extremely difficult to grind this type of clothing on the card. The advantage that the wire fillet has over the metallic clothing is that the points of the needles can be sharpened very easily. However, it is necessary that the wire fillet be ground periodically. The grinding process takes at least six hours to perform which means that the card is not producing for this length of time. It is generally figured that one card out of every 20 in a mill is stopped for grinding at all times. The expense of grinding, figuring the loss of production and the cost of labor and materials, is a considerable figure in calculating the cost of maintenance in the card room.

Clothing a card with a common wire fillet is a rather delicate task. The correct tapers must be cut at the start and finish so that the clothing will fit closely and cover the entire surface of the cylinder. The laps of fillet across the width of the cylinder must be closely wedged together for the same reason. Any gaps in the surface will produce a hole in the web, producing poor sliver. The clothing must be conditioned for at least a day before it is drawn on the cylinder, in order that it will have absorbed the same



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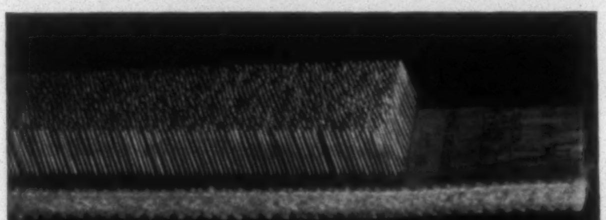
23RD YEAR OF CONTINUOUS SERVICE TO TEXTILE MILLS amount of moisture prevailing in the room where the clothing operation will be performed. In order to assure that the stretch is taken out of the clothing, it is usually drawn on the cylinder, tacked down, and left for another day. The following day the clothing is unwound from the cylinder and again drawn. On the second drawing operation, the fillet is securely tacked down. Again, in order to assure that the stretch is completely taken from the clothing, it is drawn on the cylinder under a tension of approximately 400 pounds.

There are several dangers involved in this process. If the job is hurried through and is tacked down on the first drawing process, all of the stretch inherent in the foundation may be taken out. If the tension is not great enough, all of the slack will not be taken from the foundation, and in due time it will develop looseness on the cylinder. If too much tension is applied in an effort to take up all of the stretch, the clothing may snap in two.

A cylinder, 50 inches in diameter, turning at 165 revolutions per minute, develops a strong centrifugal force. This force is constantly at work attempting to fling the clothing away from the cylinder. If there is a small amount of slackness present, the centrifugal force will develop the slackness until finally a bulge on the surface of the wire will result. The presence of slackness of the clothing is shown as a bulge on the surface of the wire. These bulges are the cause of poor carding and result in the destruction of the clothing itself. The close settings which are necessary for fine carding are impossible to attain with clothing that has bulges in it. If a close setting is made on a portion of the undamaged surface of the clothing, the bulges will come in contact with the other surfaces such as the flats and plates and will become faced, or have the needles knocked down. If a setting is made on the bulges, the setting will be too wide for the rest of the clothing. Looseness of the clothing may be corrected by having the card withdrawn, but the disadvantage of this lies in the fact that the number of tack-holes on the surface of the clothing will be doubled —for the first set of tack-holes will not be in the proper places and cannot be used again.



Top two sections show flexible wire card clothing; at bottom are individual needles.

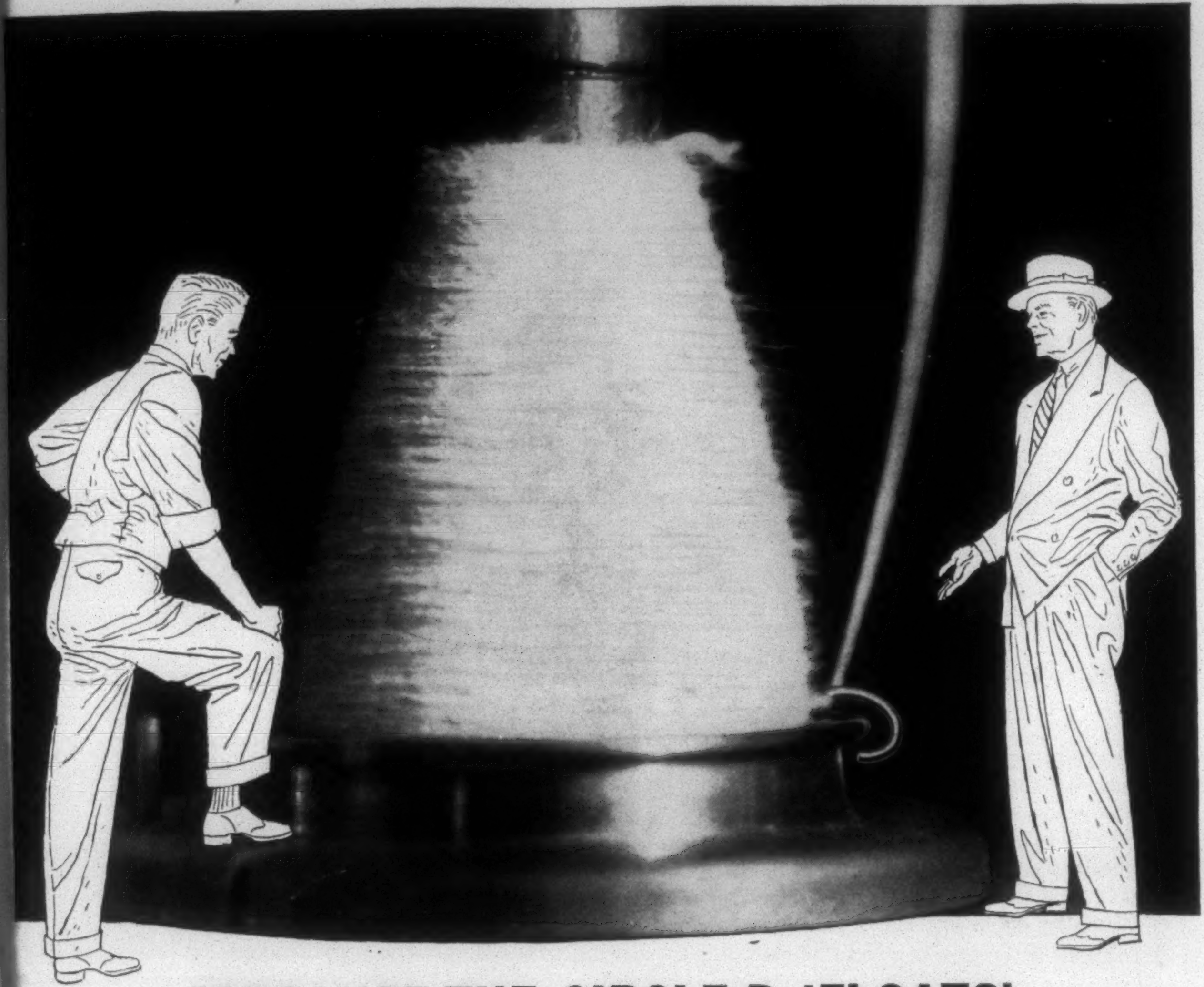
The manner in which the wire fillet is secured to the card constitutes another drawback to this type of card clothing. The fillet cannot be tacked to the cast-iron cylinder and therefore the surface of the cylinder is drilled out at certain intervals across the width of the cylinder and around its entire circumference. The drilled holes are then filled with hardwood pegs. The tacks that fasten the clothing to the cylinder are driven into these hardwood pegs. It is entirely possible that the tacks will not be driven into the pegs properly and will work loose in time, developing a bulge in the clothing. If the man who is tacking down the clothing is not careful, he may miss the tack or not hit it squarely, and will hit the wire of the clothing. Or, he may bend the tack over to one side, or he may not hit the peg squarely and will encounter the iron cylinder and bend the tack over. In either case, the tack hole will be larger than it should be. No matter how small the holes made by the tacks are in the clothing, they are not beneficial to the production of a perfectly even web. It is true that proper tacking down will leave such small holes that the quality of the web will not be affected materially, but the danger of trouble caused by improper tacking is present.

A good job of drawing on the flexible wire clothing will last for at least ten years. The foundation will remain firm and taut, and will not stretch for at least that length of time. The needles will be held in an upright position and will still have the necessary amount of individual resiliency. Flexible wire clothing must be handled correctly but it will produce entirely satisfactory results.

Metallic clothing possesses certain advantages and disadvantages in the manner in which it is applied on the surface of the cylinder. The teeth are all cut from a continuous length of flat wire, which is set in a vertical position on the cylinder so that the teeth are projecting outward. The height of the teeth is not as great as that of the flexible wire clothing and therefore the cylinder surface of the ordinary card must be built up before this type of clothing can be applied. The bare surface is usually enlarged in diameter by winding coils of plain wire around the cylinder until the necessary height is attained. This is a very tedious task and is one that consumes a great deal of time. The winding-on of the wire must be done very carefully in order to make certain that the coils are laid very closely side by side to each other and still do not overlap.

The metallic clothing is then laid in the same manner over the base wire. The metallic clothing is made with a flattened base. The widened base serves as an automatic guide so that the adjacent laps of teeth are the correct distance apart. The ends of the clothing are soldered down to keep them from becoming loose.

The flexible wire clothing is more susceptible to damage from fire and water than is metallic clothing. If a fire starts in a card with flexible wire clothing, the foundation will probably be burned so badly that it will have to be



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Evolution Of An Idea

Part One of a Series by H. E. WENRICH

DURING the war, progressive manufacturers paid out thousands of dollars to their employees for worthwhile ideas and inventions. In some instances, individuals received an initial sum plus a ratio of certain estimated savings and earnings for over a period of many months, and it was not uncommon to read of such sums grossing into the thousands—certainly a worthy compensation for an idea that would increase production, improve utility, lower operative cost, or be the means of making a new or neater product.

But what has became of idea bonuses today? Progress has not stopped. The need for new ideas did not end on V-J Day. For as the have-not nations start producing more and more of the scarce items made on machinery shipped and set up for them by American dollars, the once scarce items will become a drug on the market. It requires real salesmanship to push goods on a buyer's market. It will be a rough job for American manufacturers, and a really tough time for the American working man holding down a job producing goods that must compete with cheap, imported products. So a national emergency still exists. The need for new ideas, the need for new gadgets, and the need for employees who can think, will be ever with us!

There will be keen competition in every field. Steel will be competing with magnesium and other light metals. Concrete blocks, clay tiles, glass bricks will all be on the dollar bread line, and with the gradual introduction of better producing machinery in other countries, our own present day prosperity will depend upon the new ideas and the new gadgets that crop up from time to time on our everyday job.

How will new ideas affect the textile industry? The American textile industry is composed of numerous alliances from the share-cropper to the consumer. Plants for processing chemicals, fibers and fabrics have been built in the past, present and for the future cost many millions each. Pick out but one branch of this prodigious industry and you will be amazed at the stupendous figures relating to cost, production and employment. As an example, the American Wool Council's 1947 survey states, "The U. S. wool industry is the world's most efficient and modern with a production for 1947 of 500,000,000 linear yards of apparel woolens and worsteds. . . . Value of fabric produced is estimated to be in the vicinity of $1,250,000,000 going into clothing with a wholesale value of close to $8,000,000,000. The wool textile industry employs 165,000 persons and provides raw materials for garment industries employing 300,000 people."

But the foregoing picture is not the whole story of but one alliance of the textile industry. Into this picture can be fitted the sheep herder, the shipper, the grower of grain and producer of the many necessities required in the industry before the buyer's attention can be held in viewing some beautiful garment. And remember that the wool and worsted branch is but a child when compared with the cotton or synthetic branch of the textile industry. A mighty industry, is it not?

But what about the working man? If he thinks up some ideas that will eventually save several thousand dollars over a period of a few years, and which may even eventually become the germ of a valued invention, are his efforts to be paid off with a five spot or a century note? How can this employee reap part of the benefits of his brain-child? The foregoing questions and many more, may be difficult to answer. Surely though, if an idea is blossomed into a workable gadget that will save time or money, or be the means of increasing efficiency, the one bringing forth that idea is entitled to some form of compensation.

Compensation can be applied in several ways: money—the indispensable for human welfare; promotion—giving that better job which usually means a better pay envelope or more leisure hours; or, satisfaction—the idea-thinker-up knowing that his brain-child may be the answer in making his job an easier load to carry.

Many bright ideas have blossomed into workable gadgets, patented and promoted, bringing in that million dollars to their originators and promotors. But today, a million from a patent is only a pipe dream! Take away nine hundred thousand dollars in taxes—take away costs of development and other notes, and you still may lack sufficient pennies to pay the morning milkman. Just because that idea looks like a million, don't get the idea it will create such a terrific demand that you'll jingle a million within the year! Even Dick Tracy's—or should we say—Chester Gould's Sparkle Plenty with her resplendent textile wardrobe, required much cartooning, planning and promotion to put her across.

Say you are an employee; you have a brilliant idea that can be worked into a gadget having possibilities. Well, don't lose faith. Every employer needs a Sparkle Plenty to spark his product, and that idea of yours may bring you a nice check for a few hundred dollars; promote you to overseer of the carding room, or may be but the satisfaction of knowing you will have it easier on your job from here on out.

Faith is a great thing. The average working man could can be worked into a gadget having great possibilities. Well, the ultimate value of an idea and may kill it off while the germ is still in embryo form. But a worst tragedy is the lack of capital with which to promote an idea that has been put into the gadget stage and appearing to have great value.

It costs plenty of money to push a workable gadget into the finished product. Oh, yes, anyone can make a few samples of a model—but will these samples be alike as peas in a pod! Will every screw, every hole, every dimension

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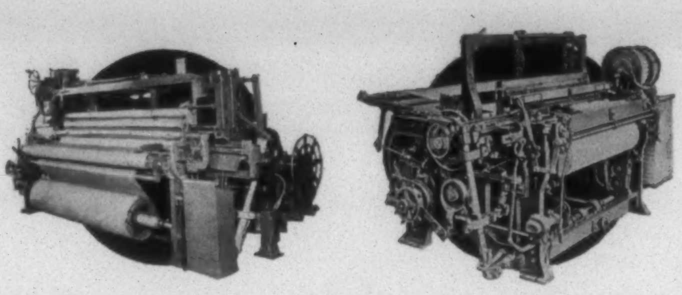

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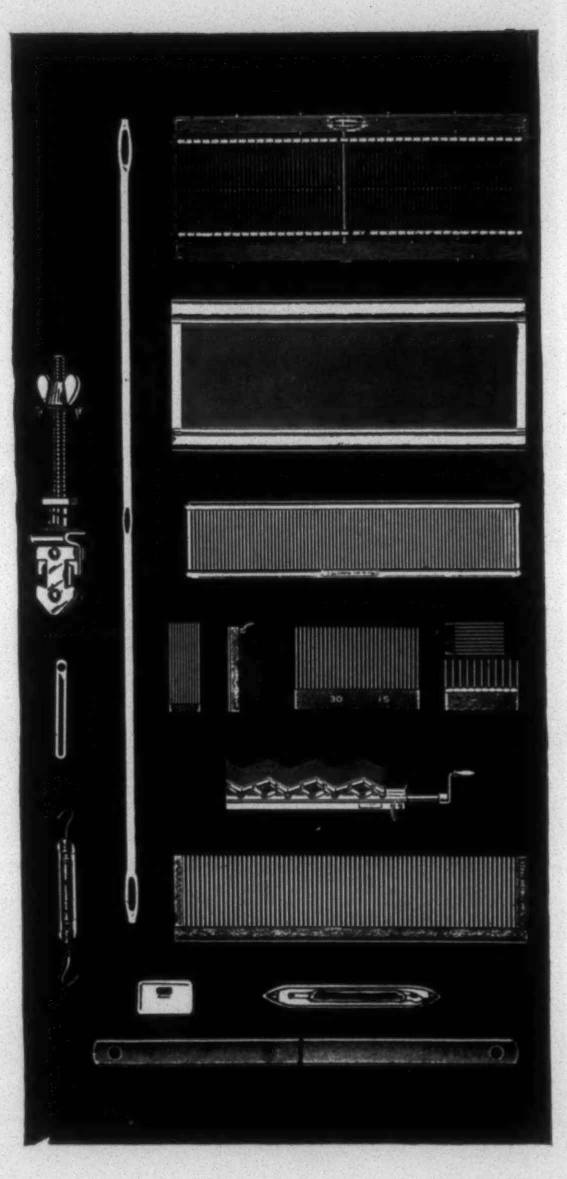

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in width, thickness and whatnot that goes into making the gadget, be alike, so one completed piece cannot be distinguished from a second? That's why gadgets cost money to market. Television started with gadgeting and it costs plenty to produce a television set and place it where the attention of buyers can see the benefits of one. But, it costs far more to American industry to let the working man's brain-child wither away like a soap bubble, before giving a chance to see if there is possibility of life.

Rayon started with an idea—and look where this infant is today! Along the way, one idea progressed thousands of ideas, ideas on new yarns such as nylons, plastic threads, new dyes and chemicals, new machinery for new processes, new products and new dressings for old products. Each and every major idea has advanced with the aid of hundreds of minor ideas. Your job may require contact with some of the foregoing, and surely, in such contact, a sudden idea crops up in your mind. It must see the light of day. You start working the idea over, and soon a new process or a new device or a new product has been an accomplished fact.

If your idea is to be a new product, or perhaps a new device, at first it must start with the idea and then be worked into the gadget stage. Remember the old hand-crank auto? Well, the self starter was a gadget that sure collected plenty of laughs in its infancy. Now look where that respected gadget is today!

Of course, every firm's idea program did not stop when the war ended. There are still a few wise leaders in American industry as illustrated by the Illinois Central Employee Suggestion System that is soon to start on its tenth year. In the past years of idea sponsoring and promotional activities, over 36,000 ideas were accepted and put into action, netting nearly $450,000 to thinkers. One of the largest single awards for an idea in suggestive form was paid to Alexander McLennan of Cincinnati, Ohio, by the Westinghouse Electric Corp., and the $5,000 award came from an idea that would reduce time in repairing small distribution transformers. Ideas do pay off!

Obviously, some ideas are worth thousands—but there are also countless ideas worth but a few dollars. Take the idea of screwing a thin strip of metal onto the back of a sweep brush and to be used as a scraper in loosening adhering dirt. Not much of an idea, but a little trick that helps materially in lessening personal body fatigue and allows the sweeper to do a quicker, better cleaning job.

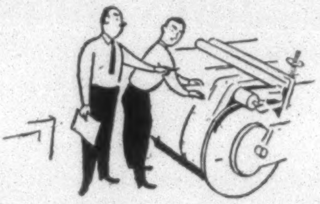
Simple, isn't it? So simple that you can realize if an idea fails to bring that coveted treasure of a million bucks, the next best thing would be to profit from it some other way. And it must not be overlooked, that there are untold numbers of ideas that would save industry time and money, but which are unpatentable. And in many other instances, many ideas are of such restricted use that a patent would be foolish to procure.

It is one thing to know that your idea will cover very little territory or pipe dream that it will lead into a fortune. In fact, that idea worked into a gadget may be nothing more than helping yourself to a few minutes rest during your working hours. But whatever the idea is, if it saves time for you or your fellow worker, or prevents machine breakdowns, rest assured that when finished into a workable gadget, it will be well worth the time you have spent on completing it.

Time and effort in working an idea into a workable device is not without its compensation. If worst comes to worst, after realizing it is not worth a fortune, you can usually sell the idea to a mechanical or trade magazine, providing it relates to something novel, interesting or worthwhile. But how are ideas born? How do they reach the gadget stage?

Ideas are born from a thinking mind. Gadgets are formed by dexterous hands. Occasionally, an idea man must have the help of a gadget maker. There are many individuals capable of thinking up an idea but utterally lacking the capabilities of working it into a component gadget. In an arrangement that may be mutually fair and agreed upon, the idea man and the gadget maker may go it on a 50-50 basis. But if you are one of the average Americans, you can gadgeteer your own ideas.

In getting that idea—like a bolt from the blue, jot it down. The trouble with us humans, we are forgetable cusses and ideas fade away unless a start is made to put them into practice. Weigh the idea thoughtfully for a few days and make further notations if necessary. Balance the good features with the unsuitable and when the idea can be pictured as a working thing, make a rough drawing—or better still, make the idea into the gadget immediately.



Anyone can think up an idea. If you see something thrown into the debris, question possibilities of its use. The writer is associated with a large textile firm. Within this plant, as well as within hundreds of competitive plants, the daily waste destroyed will run into many figures. Along with this waste are usually hundreds of cardboard tubes and many pounds of greasy rags. The question came up, "What could be done to lessen or salvage this waste?"

Sell the debris to a junk dealer? Well, that's one sure way of turning waste into pennies. But why make a deal in pennies when dollars are in demand. So the thinking cells turned up the simple expedient of salvaging the soiled cleaning rags and running them through the large extractor that is used in the drying of yarns. A few cents worth of cleaning chemicals and a few minutes time, and the recleaned rags came out ready for use. Savings amounted to several hundred dollars per year. For paper, you can generally write your own ticket. Many of the cardboard forms and cartons can be reused.

If you are working in a large plant and daily see bits of this and that burned up as just so much debris, think how you could make use of it if it were yours. Your idea may start a new business. At least, it won't endanger your position nor impair your health to be alert. And just because the first model does the job, is no reason why the end of the job has been reached.

A gadget is never satsifactory to the gadgeteer as long as it can be improved. Of course, if your employer thinks your creation has been completed and writes finis to the idea with a nice fat check, don't worry your head any further on that particular gadget, but leap into another line of thought and concentrate on that new idea you have been shifting around in your thinking cells. One gadget that has blossomed from an idea may be but one useful object from one hundred ideas—that would be a fair batting average. Your average may be better.

It is not uncommon to think up and gadget several excellent ideas in a row and then suffer a long period of months when the old gray cells don't seem to ticker right. But don't be alarmed. When troubled by a breakdown on that machine you are operating, just ask yourself "What can I do to prevent another break like this one?" A gadget answering that question may require considerable mental turmoil, but in the end you will profit with a finished article in having furnished the answer, as well as having the satisfaction of knowing you have created something useful and out of the ordinary.

Employers are looking for ways to improve machinery output so as to keep your wages up. They must compete with cheap, imported products, and the quicker our own market is flooded, so much the quicker will the American working man be pressing down concrete—hunting for jobs. To keep your job and make it better, look around. You may see something that has been overlooked. Tinker around with that something and you may come up with a radically new design or product. Don't try to be a master mind and try for the stars—just stick down on earth and search around your working area for that something to improve. Forget about television and atomic power if your daily tasks places you around spindles, knitting needles and weaving machinery.

A better conception of what goes on within the machines clattering around you, the more worthwhile your ideas will be. Try to realize that joint enterprise directed toward better jobs, will enable American industry to profit with increased efficiency and earnings; you profit with easing your daily tasks and your co-workers profit when your idea is applied to their working time and functions for their benefit. And after many attempts, in your own sphere of well being, you may be the one to joust Dame Fortune into dumping the jackpot into your jeans.—*To be continued.*

Executives' Responsibility In Machine Operation

By ALBERT PALMER, Vice-President, Crompton & Knowles Loom Works

—Before Textile Section, American Society of Mechanical Engineers—

THE necessity for cost reduction in manufacturing establishments of all kinds has focused attention on the betterment of plants. New machinery and equipment are wanted to replace obsolete and worn-out facilities. The general belief is that, by its installation, high costs will disappear.

Unfortunately, the mere installation of new machines does not produce the desired results. Unless careful attention is paid to the surrounding conditions, new equipment will not make savings. Somebody must prepare the way and then watch the installation to be sure that the fullest use is made of the machine's capabilities.

The general procedure in purchasing new equipment is for the chief executives of a business to decide that new machinery is to be acquired. Once this decision is made they depend upon the men who operate the plant to recommend the exact machines that are to be purchased and to settle all the details of the specifications with the machinery manufacturer.

The order is then placed and eventually the machinery is delivered. Then comes the test. In some plants it runs. In others it does not, even though the machinery and the work are the same in both places.

Faulty Operation Linked to Preparation

The explanation for this situation leads right back to the management of the company that buys the machinery. Where the way has been prepared, the installation is successful. Where it has not, and the machinery is just dumped into the plant, the equipment generally does not operate satisfactorily and its maker is blamed for the poor performance.

It does not make much difference what kind of machinery is involved. A concern that buys a quantity of new molding equipment and then tries to run it with old patterns and core boxes does not obtain the desired results. Neither does the company that installs new machine tools and continues to use old cutters where the latest carbide tools should be used. The same situation exists with the buyer of textile machinery who still makes warps that are full of crossed and knotted ends and who uses filling that is not conditioned properly.

The physical surroundings of new machinery are only a part of the story. Why some manufacturers think that their employees can take a machine which they have never seen before and run it is beyond comprehension.

Nevertheless, there are innumerable instances where the assumption is made that, because a man has operated a certain type of machine before, he should be able to take a new machine of the same general character and run it without any preparation for the job.

The preparation of the employees for work on new equipment depends largely upon someone in the organization having a thorough knowledge of the new machinery and having conviction that the new machinery will produce the desired results if it is handled properly. This person must have authority and must be willing to take the responsibility for selling the machinery and the new ideas that go along with it to his associates, many of whom probably will be opposed to changes that affect them.

Machinery builders have recognized the necessity for preparation. Some of the machine tool concerns run schools to which key operating men from their customers' plants are invited. Other concerns, such as the textile machinery builders, take the customers' key men and give them an opportunity in a less formal way to learn how to operate the machinery by working with the erectors and servicemen of

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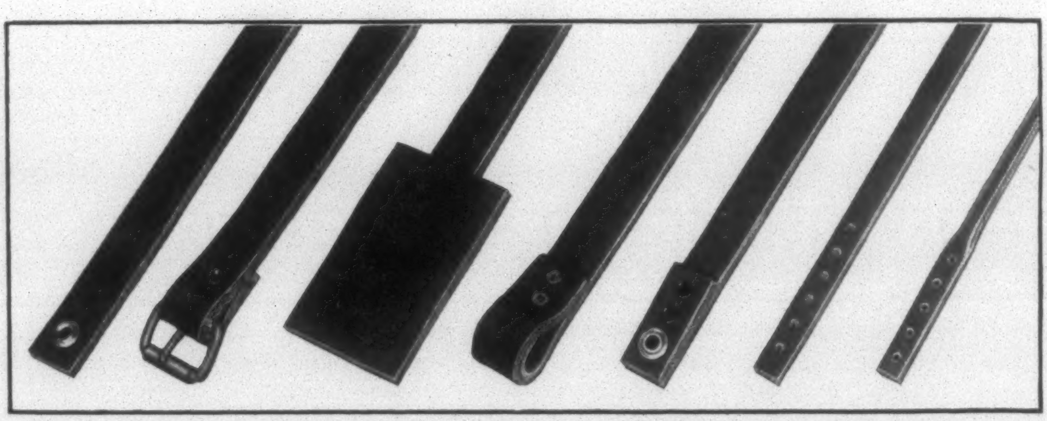

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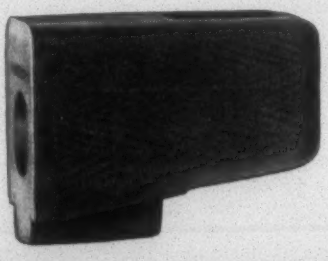

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the builder when the machinery is being assembled and tested.

Usefulness of Shop Training

The desirability of sending men to the machinery builders seems to be appreciated more by foreign than by domestic purchasers—at least men that are sent take the job seriously and generally return to their companies with notebooks filled with information and with themselves filled with enthusiasm and the belief that they can make the job go at home.

Even though some companies send a man to the builder's plant and even though instruction manuals and other information are provided by the builder, satisfactory results are not obtained when the new machinery is installed.

Here management and labor both are at fault through carelessness, negligence, or incompetence. For one reason or another both sides have failed to come to a common understanding of the problems of the company and have failed to create the interest and enthusiasm that are needed to enable everybody involved to obtain the benefits that should result from the capital investment which has been made by the company.

Mill Management Called Responsible

A mill man has a right to expect co-operative help from the machinery manufacturer and from the employees of the mill. But he must take the responsibility himself for supplying the proper physical conditions surrounding the new machinery and for seeing that his employees are prepared properly to handle the equipment. Of these two responsibilities, the latter is admittedly the more difficult.

To teach people new procedures and techniques and to give them the proper viewpoint is a trying task, the accomplishment of which is not by any set rules. However, if employees are informed ahead of time concerning the aims and plans of the company and if an attempt is made to show them how the security of their jobs depends upon the successful attainment of these objectives, intelligent employee co-operation should be the result.

Instances of the desirability of this action are a matter of record. Some of the mills that are doing the best job for their customers, for their employees, and for their stockholders are newly equipped mills that a few years ago were seriously handicapped by obsolete facilities.

Those that met with the greatest success were the ones that called their employees in even before the orders for equipment were placed.

These original meetings at which the plans and the policies of the company were outlined were followed by others at which the problems that arose in starting up the new machinery were discussed.

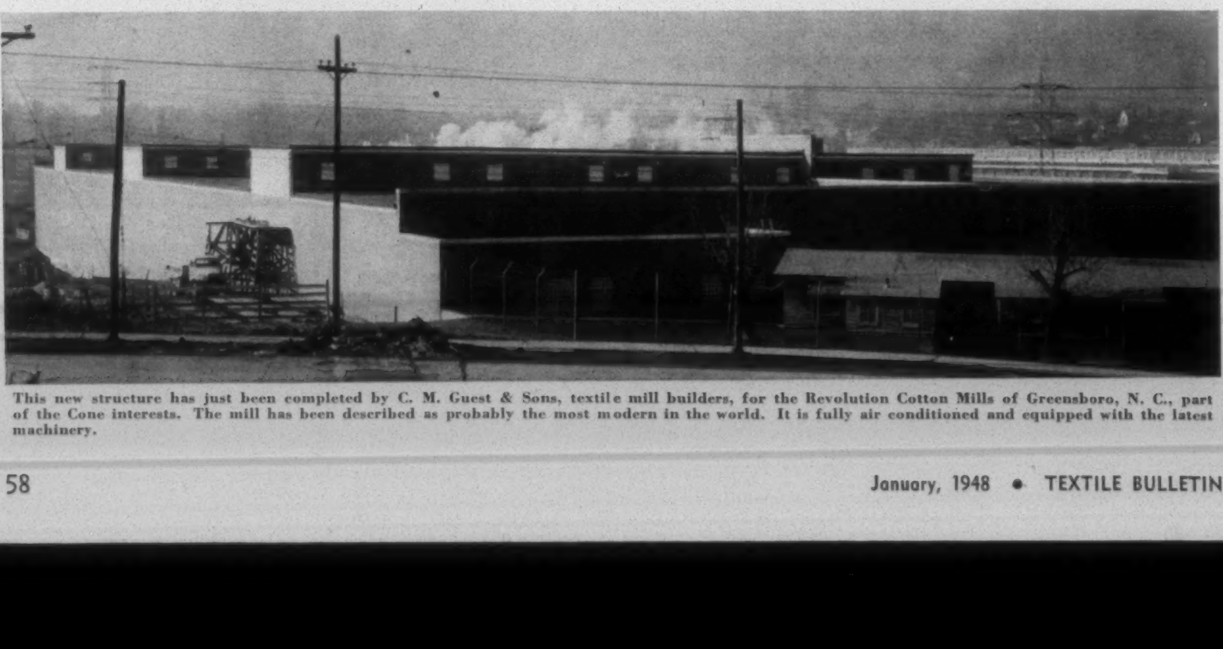
In addition, educational classes were held at which the employees not only received instructions, but also had the opportunity to express their own ideas. However, the real secret to the successful outcome of the project lay in the fact that top management took an active personal interest and by active participation in the proceedings infused the whole organization with a spirit of determination and enthusiasm which overcame the obstacles that lay in the path of progress.

Cone Enters Rayon Fabric Field

A BRAND-NEW offshoot from a tight cluster of textile mills which lies on the northern perimeter of Greensboro, N. C., has recently increased the manufacturing space of the expanding Revolution Cotton Mills by some 140,000 square feet. Revolution Cotton Mills is an integral part of the vast textile interests known as Cone Mills Corp.

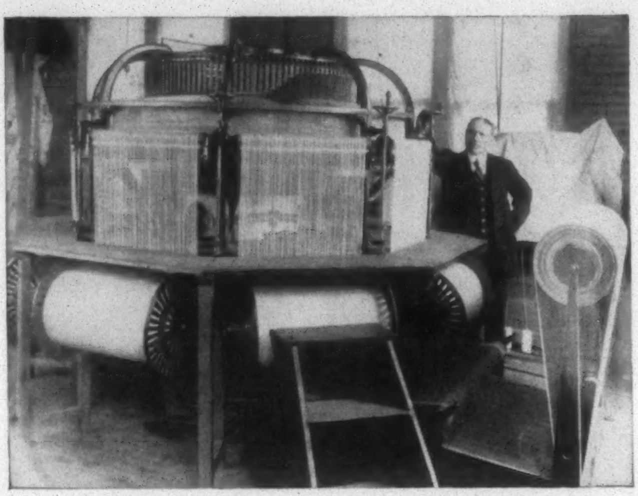
But, contrary to the name its parent bears, the new plant will not concern itself with cotton textiles as its brothers have done for so many years. Rather it will be used for something entirely new to Revolution and, for that matter, to the whole system of Cone mills—spun rayon weaving. When the new offshoot swings into production—which will be as soon as machinery installation has been completed—rayon fabrics will be flowing from Cone looms in quantity for the first time in history.

In December Herman Cone, president of Proximity Mfg. Co., and Marion W. Heiss, vice-president, manned the sterling silver mortar trowels presented to them by Mill Builder Romeo Guest to seal a date stone in place. The textile executives set the stone in the brick-steel structure at a brief ceremony which marked the completion of the new mill. Inscribed in the stone is the Cone Seal of Service and



This new structure has just been completed by C. M. Guest & Sons, textile mill builders, for the Revolution Cotton Mills of Greensboro, N. C., part of the Cone interests. The mill has been described as probably the most modern in the world. It is fully air conditioned and equipped with the latest machinery.

It Looked Like A Good Idea...



at the Time

Years ago, the unknown inventor built this circular loom to revolutionize the weaving industry! And every year, hundreds of individual attempts are made to improve loom design . . . some of them practical . . . many more impractical. But all of them, in one way or another, contribute something to progress.

The great majority of these attempts find their way, naturally, to the "Clearing House of Ideas" at C&K. All these ideas are carefully weighed and tested in the engineering and research departments. Only the best are passed on to you, in C&K Looms . . . and then only after they have passed muster with at least one of C&K's 6 Sentries of Modern Weave-room Efficiency:

1. Does it increase Speed of Operation?
2. Does it increase Continuity of Operation?
3. Does it decrease the Work of the Operator?
4. Does it decrease Cost of Maintenance?
5. Does it improve Quality of Fabric?
6. Does it improve Appearance or Utility?

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between Today's Knowledge . . .
and Tomorrow's Looms

the date of completion. A group of Southern textile leaders was on hand to inspect the building after the stone-laying ceremony.

Herman Cone, left, president of Cone Mills Corp., and Marion Heiss, vice-president, are shown using silver mortar trowels in preparation for laying the date stone at the new 140,000-square foot rayon weaving plant.

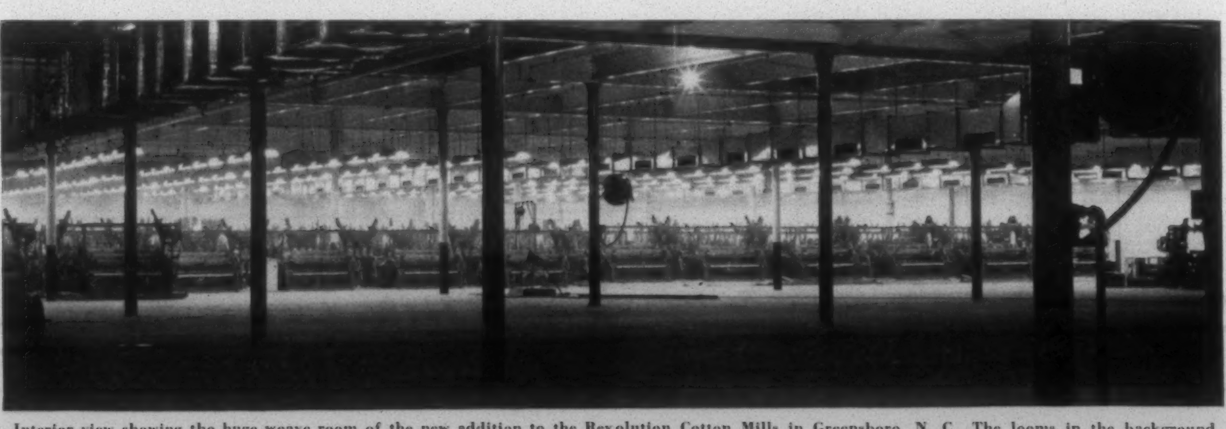
Romeo Guest, left, of C. M. Guest & Sons, Greensboro, N. C., and A. D. Asbury of the J. E. Sirrine Co., Greenville, S. C., give the Cone mill date stone the once over. Guest's company built the ultra-modern spun rayon weaving plant in Greensboro and the Sirrine firm did the engineering.

Revolution's first spun rayon weaving plant is a modernistic, windowless, completely air conditioned structure designed and built in conformity with up-to-the-minute developments in mill layout. Counting the basement beneath about three-fourths of the one-story building, square footage adds up to nearly 140,000 or more than three acres. Included in this figure are the dressing rooms, air conditioning housing, and lavatories. More than an acre and a half of terrain is covered by the new plant. It is 410 feet in length—which is more than the average city block—and 153 feet in width.

The solid brick walls of the structure rise from the clay just to the south of the Revolution cotton warehouses. As seen from the street, the building appears low and sprawling due to the sunken terrain on which it is erected; therefore, the size is not immediately apparent. But outside looks are deceiving; for once inside one sees a shining maple floor studded with row upon row of new dobby looms, 360 in all. Light from hundreds of fluorescent tubes casts a spotless sheen on the buff structural glazed tile which forms the inner wall. Not seen but present is a layer of foam glass insulation to separate the glazed tile from the outer brick. Overhead is a steel roof frame with wooden planking and insulated with cork to permit the air conditioning units to cool the hottest days of summer and warm the coldest days of winter.

Although the new mill is not the largest in the South, it does have the distinction of being one of the region's largest spun rayon weaving plants. Representatives of C. M. Guest & Sons, the builders, have described the plant as one of the most modern in the world. In designing and constructing the plant for Revolution both the J. E. Sirrine Co. of Greenville, S. C., the engineers, and Guest incorporated know-how gleaned from many years of experience in textile construction.

Besides the 360 dobby looms, 150 of which are the box type, the new plant will have equipment for slashing, warping, throwing, quilling, twisting and various other operations connected with rayon weaving. Most of the spun rayon to be used by the mill will come from a plant at



Interior view showing the huge weave room of the new addition to the Revolution Cotton Mills in Greensboro, N. C. The looms in the background will weave rayon which will pass from them through slots in the floor and on into the basement, where it will be inspected before being wound.

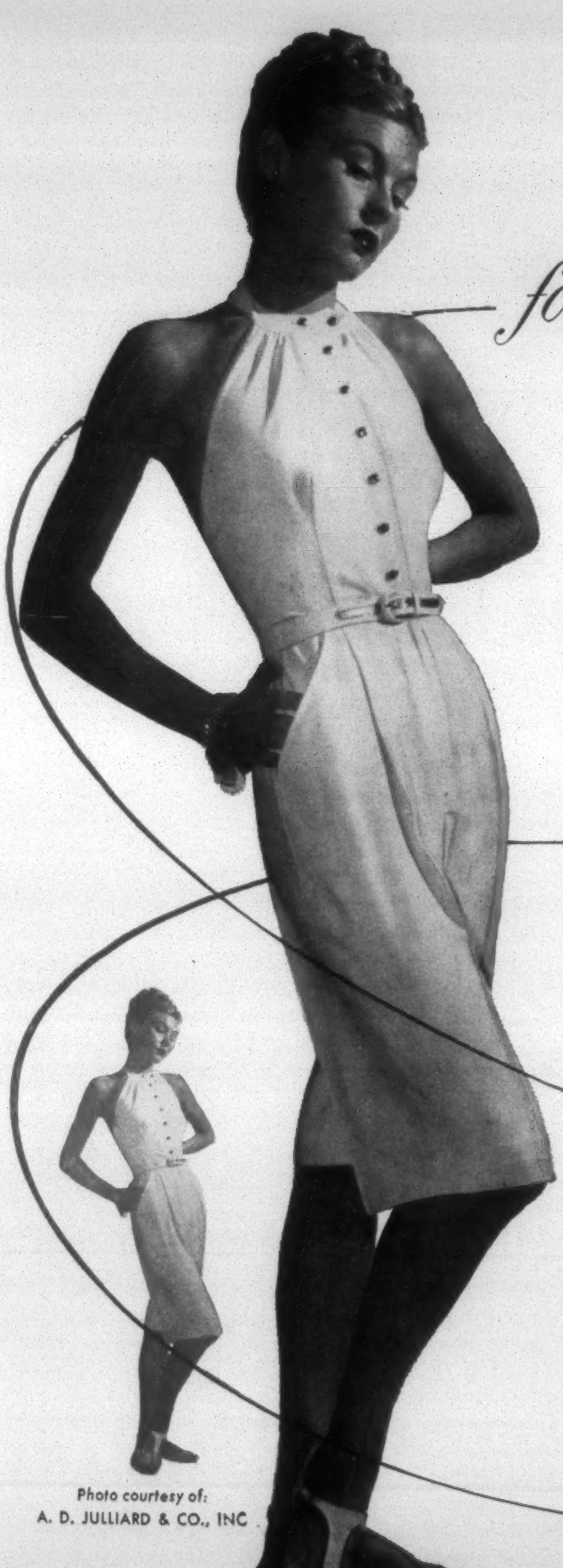


Photo courtesy of:
A. D. JULLIARD & CO., INC

Spunjel FOR WARP SIZING SPUN RAYON

for solid blending

SPUNJEL maintains the original fiber blend balance in the yarn. Its high adhesiveness and strong, flexible film securely anchors all surface fibers—and effectively reduces shedding on the slashers and looms. It assures a woven fabric that closely approximates the pleasing appearance and hand of expensive worsteds.

SPUNJEL is a specially prepared warp sizing for spun rayon blends containing cotton, wool, acetate and other natural and synthetic fibers. Its high adhesiveness produces results similar to gelatin and makes it particularly suitable for single or plied yarns of acetate or protein fibers.

SPUNJEL—which is readily desized by all standard procedures—permits the woven fabric to fluff out better because it has been woven tightly without loss of bulk through shedding.

National also produces: **NALEX** for cotton and worsted warp sizing; **AMBERTEX** a heavy-bodied thickener for white discharge, direct and vat color printing; **FIBERTEX** for textile finishing; **FLOTEX** to replace natural gums for printing; **FLOJEL** uniform, thin boiling corn starches in all standard fluidities; **HOOSIER** Pearl Cornstarch.

Offices: 270 Madison Avenue, New York 16; Boston, Philadelphia, Atlanta, New Orleans, Indianapolis, Chicago, San Francisco and other principal cities. In Canada: Meredith, Simmons & Co., Ltd., Toronto and Montreal. In Holland: Nationale Zetmeelindustrie, N. V., Veendam.

National
STARCH PRODUCTS

STARCHES—AND SPECIALTIES • WITH EASILY DEMONSTRATED SUPERIORITY

Randleman, N. C., which is another segment of the Cone textile group.

One innovation in the new plant is a system by which the woven cloth passes from the looms through protected slots in the floor and on into the basement. There it is inspected before being wound on V-frames for storage and shipping. This system, which is expected to promote more rigid quality control, was developed under the direction of Mr. Heiss about a year ago.

At the date stone ceremony for Revolution's spun rayon weaving plant Mr. Heiss praised the handsome plant as an "eloquent tribute" to the combined skills of the J. E. Sirrine Co., C. M. Guest & Sons, and Revolution's own engineering personnel. The mill was dedicated to a "living, progressive future in which men and women can work co-operatively together that they may produce and profit."

The new plant is under the direct supervision of Lennie Ritter, assistant superintendent of Revolution and a Cone employee since 1923. Coley Phillips continues as general superintendent.

Maintenance & Engineering

The Electrical Code And Textile Mill Wiring

Part Five of a Series by JAMES T. MEADOR

LAST month we discussed Article No. 370 of the National Electrical Code which covered outlet boxes, switch boxes, junction boxes, fittings, etc. This month we will get into the part which is of special interest to you gentlemen who are responsible for electrical installations in textile mills. And that part consists of two divisions: Article No. 373, Cabinets and Cutout Boxes; and Article No. 374, Auxiliary Gutters.

Cabinets and Cutout Boxes

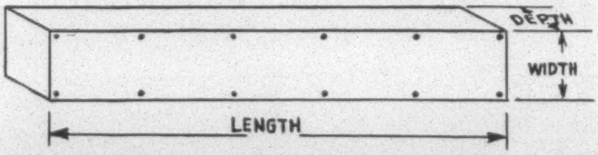
Section 3731—Scope: The provisions of this article shall apply to the installations of cabinets and cutout boxes in normal installations. Installations in hazardous locations shall conform to the provisions of Article No. 500 (later discussion).

Section 3732—Damp or Wet Locations: In damp or wet locations, cabinets or cutout boxes of the surface type shall be so placed or equipped as to prevent moisture or water from entering and accumulating within the cabinet or cutout box and shall be mounted so that there is at least one-half-inch air space between the box and the wall or other supporting surface. Cabinets or cutout boxes installed in wet locations shall be weatherproof.

Section 3733—Position in Wall: When mounted in walls of brick, tile, concrete or other non-combustible material, cabinets shall be so installed that the front edge of the cabinet will not set back of the finished surface more than one-quarter of an inch. In walls constructed of wood or other combustible material, cabinets shall be flush with the finished surface or shall project therefrom.

Section 3734—Unused Openings: Unused openings in cabinets or cutout boxes shall be effectively closed to afford protection substantially equal to the walls of these boxes, cabinets, etc. This may be accomplished by means of metal plugs or plates, or, where available, by regular knockout closures.

Section 3735—Conductors Entering Cabinets or Cutout Boxes: Conductors entering such enclosures must be protected from abrasion or injury by the edge of the opening, and shall conform to these two provisions: (a) openings through which the conductors enter must be adequately closed (by bushing, nipple, conduit fitting, etc.); (b) where metal cabinets or boxes are used with open wiring or concealed knob and tube work, conductors shall enter through insulating bushings, or, in dry places, through flexible tubing extending from the last insulating support and firmly secured to box by means of connectors of the proper type.

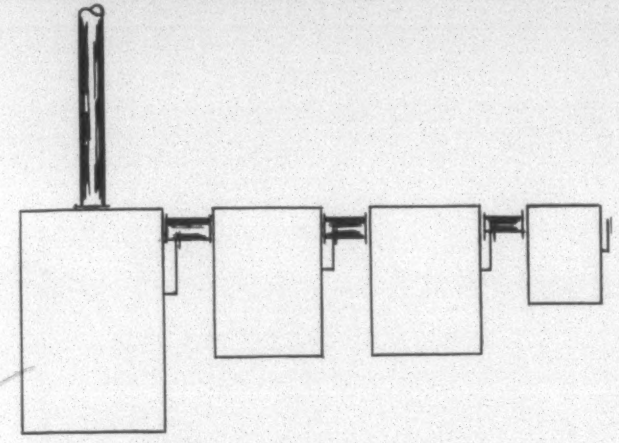


Sketch of screw-cover duct or gutter applying to Section 3736, showing that the length may be as desired or available, with the width in accordance with the above section, and the depth in proportion with the width.

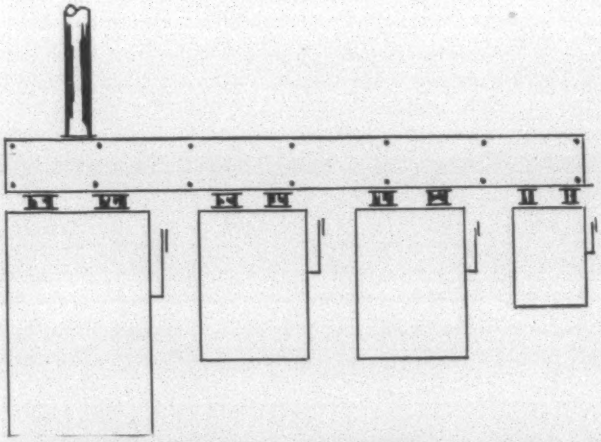
Section 3736—Deflection of Conductors: Conductors entering or leaving cabinets or cutout boxes, etc., shall conform to these provisions: (a) *Width of Gutters*—Vertical conductors of No. 1 or larger shall not be deflected where they enter or leave a cabinet or box unless there is provided a gutter having a width in accordance with the following table:

Conductor Size	Minimum Width of Gutter in Inches
No. 1	3
No. 1/0 to 200,000 c.m.	4
211,600 c.m. to 500,000 c.m.	6
600,000 c.m. to 900,000 c.m.	8
1,000,000 c.m. to 1,400,000 c.m.	10

(b) *Insulation at Bushings*—Where ungrounded conductors of No. 4 or larger are deflected or bent more than 30° when entering a raceway from a cabinet, box or gutter, they must be protected by a substantial bushing providing a smoothly rounded insulating surface unless they are separated from the raceway fitting by means of some substantial insulating material securely fastened in place. If conduit bushings are made of wholly insulating material, a locknut must be used both inside and outside of the box or cabinet, etc., to which the conduit is attached. In other words, use the "double locknut connection."



This is the way switches sometimes have been grouped in times past, a practice now prohibited by provisions of the 1948 National Electrical Code.



Section 3737 of the code now calls for grouping of switches. The arrangement employs a screw-cover duct or gutter.

Section 3737—Space in Enclosures: (Look out, here comes a late ruling that is being enforced wherever the provisions of this code are being guarded; see part "b" below.) Cabinets and cutout boxes shall conform to the following: (a) To accommodate conductors, cabinets, boxes, etc., shall be selected which have sufficient space to accommodate all conductors installed in them without crowding. (b) Switch enclosures (meaning the usual fusible safety switch, with fuses, etc., such as you have used for a long time) shall *not* be used as junction boxes, troughs or raceways for conductors feeding through or tapping off to other switches, unless special designs are employed to provide adequate space for this purpose. In other words, don't use one switch as a tap box or tapping point for leads to other switches, like we all used to do in the past. Times and ideas both have changed.

Auxiliary Gutters

Section 3741—Purpose: Auxiliary gutters used to supplement wiring spaces at meter centers, switch groupings, distribution centers, above and below switchboards and similar points of interior diring systems, may enclose conductors or bus bars, etc., but must not be used to enclose switches, fuses or overcurrent devices or other appliances or apparatus.

Section 3742—Extension Beyond Equipment: An auxiliary gutter shall not extend a greater distance than 30 feet beyond the equipment which it supplements, except in elevator work. Any extension beyond this distance shall comply with the provisions for *Wireways* in Article 362 (TEXTILE BULLETIN, Oct. 1, 1947), or with the provisions for *Busways,* Article 364 (TEXTILE BULLETIN, Nov. 1, 1947).

Section 3743—Supports: Gutters shall be supported throughout their entire length at intervals not exceeding five feet.

Section 3744—Covers: Covers shall be securely fastened to the gutter along all sides or edges.

Section 3745—Number of Conductors: Auxiliary gutters shall not contain more than 30 conductors at any cross-section, unless the conductors are for signalling or control circuits, or are control conductors between a motor and its starter, and used for starting duty only. The sum of the cross-sectional area of all contained conductors at any cross-section of an auxiliary gutter shall not exceed 20 per cent of the internal cross-sectional area of the gutter. (For elevators, see Section 6215—later.)

Section 3746—Carrying Capacity of Copper Bars: The current carried continuously in bare conductors in auxiliary gutters shall not exceed 1,000 amperes per square inch of the cross-sectional area of the conductor.

Section 3747—Clearance of Bare Live Parts: Bare conductors shall be securely and rigidly supported so that the minimum clearance between bare current carrying metal parts of opposite polarities mounted on the same surface shall be not less than two inches, nor less than one inch for parts that are held free in the air. A spacing of not less than one inch shall be secured between bare current-carrying metal parts and any metal surface. Adequate provision shall be made for expansion and contraction of copper bars.

Section 3748—Splices and Taps: Splices and taps shall conform to the following provisions: (a) Splices or taps, made and insulated by approved methods, may be located within gutters if they are accessible by means of removable covers or doors. The conductors, including splices and taps, shall not fill the gutter to more than 75 per cent of its cross-sectional area at any point. (b) Taps from bare conductors shall leave the gutter opposite their terminal connections, and conductors shall not be brought into a contact with uninsulated, current carrying parts of opposite polarity. (c) All taps shall be suitably identified at the gutter as to the circuit or equipment to which they apply. (d) Tap connections from conductors in auxiliary gutters shall be provided with fuse or overcurrent protection in conformity with the provisions of Section 2434 (TEXTILE BULLETIN, Aug. 1, 1947).

Section 3749—Construction: Auxiliary gutters shall be constructed in accordance with the following provisions: (a) Gutters shall be so constructed and installed that adequate electrical and mechanical continuity of the complete raceway will be secured. (In other words, see that you have a solid and unbroken "ground" on your job.) (b) Gutters shall be of substantial construction and shall provide a complete enclosure for the contained conductors. All surfaces, both interior and exterior shall be suitably protected from corrosion. Corner joints shall be made tight, and where the assembly is held together by rivets or bolts, these shall be spaced not more than 12 inches apart. (c) Suitable bushings, shields or fitting having smooth rounded edges shall be provided where conductors pass between gutters, through partitions, around bends, between gutters and cabinets or junction boxes and at other locations where necessary to prevent abrasion or cutting into the insulation of the conductors. (d) This is a very important part, and one that is so often neglected. Gutters shall be constructed of sheet metal of thicknesses not less than those given in the following table for the various sizes of gutters, etc.:

Maximum Width of Gutter in Inches	Thickness (USS Sheet Steel Gauge)
Up to and including six inches	No. 16....0.0598″
Over six inches and not over 18 inches	No. 14....0.0747″
Over 18 inches and not over 30 inches	No. 12....0.1046″
Over 30 inches	No. 10....0.1345″

(e) Where insulated conductors are deflected or bent within the auxiliary gutter, either at the ends, or where conduits, fittings, or other raceways enter or leave the gutter, or where the direction of the gutter is changed or deflected greater than 30° (like going around a corner), dimensions corresponding to those of Section 3736 (this issue) shall apply.

Author's Note: Thanks to J. C. Porter, superintendent of power, heating, etc., at Rock Hill (S. C.) Printing and Finishing Co., who called our hand about the dimensions used in the sketch which appeared on Page 33 of the Dec. 1, 1947, issue. He said that he thought it represented a new kind of arithmetic we were promoting. The sketch should have shown six by three inches, plus three inches, to total 21 inches as the dimensions of the box in question.—*James T. Meador.*

Eliminating Fuel Waste

By J. D. ELFRETH, Service Manager, and A. MacHARG, Service Engineer
Cochrane Corporation, Philadelphia, Pa.

THE service engineer in his routine calls on power plants is frequently astonished at what appears to be a disregard of fuel saving possibilities in the average plant. Many operators apparently are of the opinion that such losses are to be expected and cannot be remedied. This is surprising in view of the common knowledge that approximately one per cent of fuel is saved for every 11° F. that the temperature of the boiler feedwater is raised. It is frequently noticed that:

(1) Exhaust steam is being discharged to atmosphere instead of being used in a feedwater heater to raise the boiler feed temperature. (2) High temperature condensate is being discharged into low pressure receiving tanks vented to atmosphere or into open hotwells. (3) The blowdown from boilers is being discharged directly to waste instead of through a heat reclaiming system. (4) Even in plants where feedwater heating equipment has been installed, faulty installation or operation occasionally prevents the securing of the saving for which the unit was purchased.

In a recent inspection, a Cochrane deaerating heater designed to operate at ten psi and to heat the feedwater to 240° F. was found to be delivering water to the boiler feed pumps at 100° F., this deficiency in temperature representing a fuel loss of 12 per cent. The reason was found to be that the heater had been installed at such a low elevation that there was not sufficient static head for adequate pumping without flashing. The heater is now being raised so as to secure the proper static head on the boiler feed pump suction and to permit operation at the designed ten psi pressure. This will increase the feed water temperature to 240° F. and insure satisfactory deaeration.

It is also a common occurrence to find a feedwater heater properly installed and providing adequate head on the boiler feed pump suction but delivering feedwater at a temperature so low as to entirely defeat the purpose for which the installation was made. Investigation will show that the atmospheric vent valve is shut off tight, thus preventing the elimination of the non-condensable gasses which are liberated from the water in heating. These non-condensable gases accumulate in the heating section of the unit and prevent the entrance of steam into the heating section. In such a case, merely opening the vent valve a sufficient amount to show a slight flow of steam to atmosphere will immediately correct the trouble.

It is also a common experience to find traps draining live steam separators or steam headers discharging to waste or to atmospheric receiving tanks or hotwells. The condensate should be discharged to the connection provided on the feedwater heater, thus not only saving the water itself, but utilizing the flash steam from the high temperature condensate for heating the cold makeup water. It is surprising to find a number of plants still blowing down their boilers directly to waste, and on some erratic schedule determined by the judgment of the operators. The use of a continuous blow-down system would not only result in the maintenance of a uniform concentration in the boiler but would also reclaim the heat in the blow-down water which is otherwise going to waste.

The following suggestions will serve as a check list in determining the savings possible in any particular plant.

Maintain a high feedwater temperature—Recover exhaust steam that might otherwise be wasted by utilizing it in a direct contact open or deaerating feedwater heater. Do not allow any steam to escape to atmosphere that can possibly be used in the plant.

Recover the heat in boiler blowoff water — The steam flashed in flash tanks can be used in the feedwater heater or process lines. Heat exchangers recover the remaining heat in the blowoff water before discharging it to sewer.

Return all condensate to the boiler—If oil contaminated, remove the oil from the exhaust with a steam purifier or pass the condensate through an oil removal filter. To run condensate to the sewer is sheer waste of heat and water. Enter trap discharges and heating system returns to the open

THE LONG HAUL

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feedwater heater. Avoid loss of flash steam in open receivers and hotwells. Return high temperature condensate from corrugators, dryers, process kettles, etc., directly to the boiler by the use of a condensate return system.

Reduce moisture content of steam—Steam purifiers can reduce the moisture from five per cent or more down to less than one per cent, resulting in dryer, hotter steam.

Check boiler water treatment—Accumulations of scale on any heating surface seriously restricts the transfer of heat and such deposits are a major cause of boiler troubles in addition to waste in fuel. Corrosion is both dangerous and costly.

Keep on the watch for steam and hot water leaks—A one-eighth of an inch diameter steam leak in a 100 psi line will cause the loss of over 50,000 pounds of steam in a month. Make sure that all valves in steam line close tightly.

Insulation or lagging—Keep all piping and steam using equipment properly insulated to cut down heat losses.

Practice preventive maintenance—Don't wait until trouble catches up with you. Be on the lookout for it. Keep a reasonable supply of replacement parts on hand, as they are often difficult to secure when you have a breakdown. Make use of all available instruments, and regularly check the effciency of your equipment with them. Avoid overloading boilers above their efficient operating rate. Keep furnace bafflles tight and use soot blowers regularly.

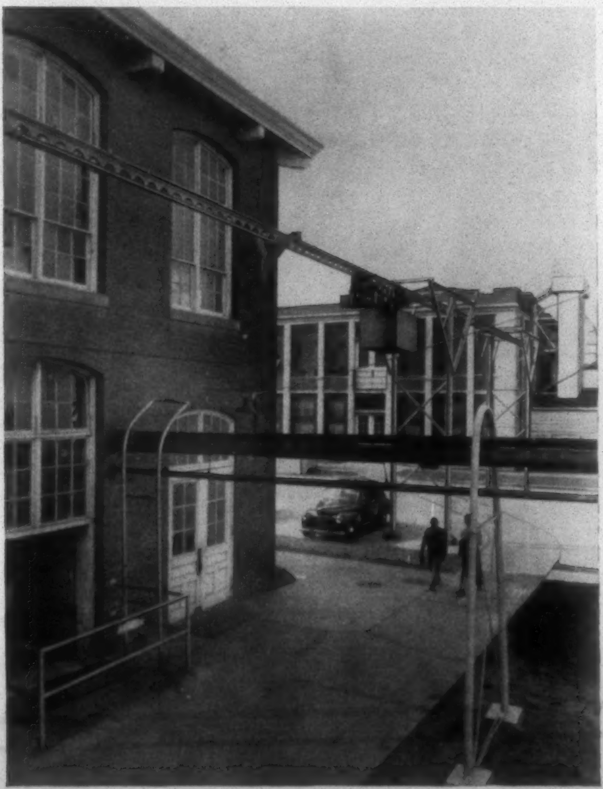
With the increased cost of fuel over the past few years it becomes more important than ever to keep a continuous check on sources of waste in steam power plant operation as well as in all the other phases of business-like management.

Materials Handling

An Automatic Dispatch System On The Job

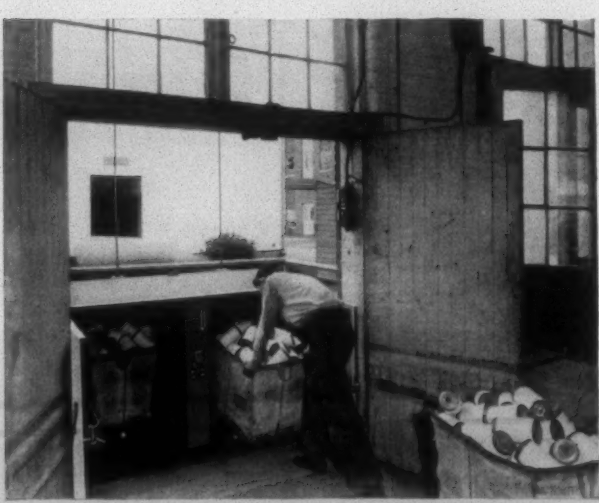
By S. R. BROOKSHIRE, Engineering Sales Co., Charlotte, N. C.

TYPICAL of modern materials handling installations in Southern textile mills is the Cleveland Tramrail automatic dispatch system at the General Asbestos and Rubber Division of Raybestos-Manhattan, Inc., at North Charleston, S. C. This system carries box trucks, two at a time, loaded with bobbins of asbestos yarn from the spinning room on the first floor of one building to the weave room located on the second floor of a building across the street. The unit operates 16 hours per day, and has done so for five years, in all kinds of weather.



Carrier travels from spinning room in building at left to weaving department across the street. The Tramrail archbeam is supported by building brackets and "A" frames on either side of street. ***(Photographs with this article furnished by Cleveland Tramrail.)***

Before installing this equipment, the job was done by hand labor, the box trucks being pushed manually, one at a time, across the street, often in the cold and rain, and then carried by a freight elevator to the weave room second floor. The job was slow, drudgerous and expensive. Now, pushing a wall button starts the carrier, with its pay-load of two trucks, on its way. Leaving the first floor station, the load is hoisted to the top position where it actuates a switch which starts the carrier towards its destination across the

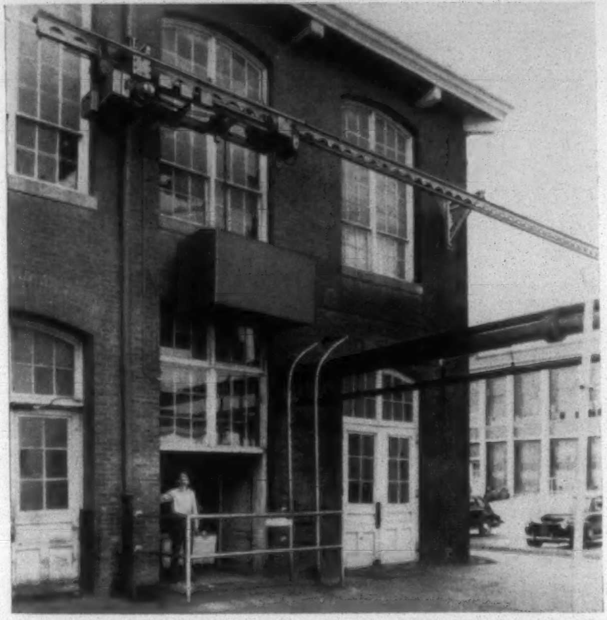


Two floor trucks of bobbins are hauled per trip; full bobbins in one direction, empties in the other. Load cannot be hoisted until doors are closed and securely latched. Depressing wall button starts load on way.

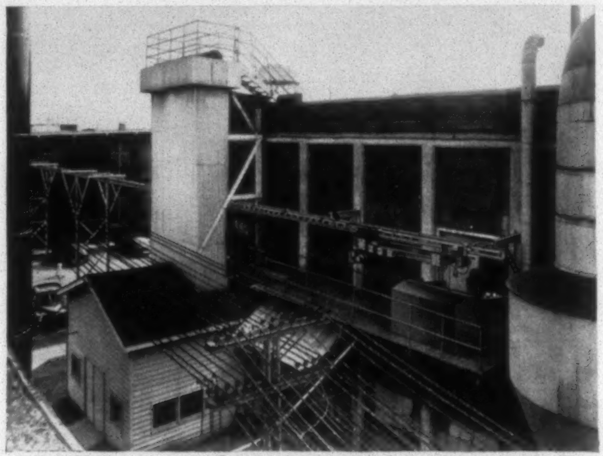
street. Arriving at its destination (second floor weave room) the full box trucks are removed and two empty trucks are placed in the unit for the return trip, also accomplished by merely pressing a push-button.

Incidentally, but of considerable importance from the safety angle, the load cannot be moved until the doors or gates on the unit have been closed and latched. In addition to the labor saving, which is substantial and shows a handsome return on the investment in the equipment, there are also important savings from the reduction in maintenance and parts replacement of floor trucks.

The distance hand trucking has been eliminated and no special operators are required. The loading and unloading is done by regular production workers along with other work to which they are assigned. The elevator has had a heavy work load removed, freeing it for other work. And, the Tramrail System has helped smooth out production into a quiet even flow. Small wonder the superintendent termed this system a "Godsend." The system was designed and sold by the Engineering Sales Co. of Charlotte, N. C.



For outgoing loads carrier will not operate until load is hoisted and firmly positioned to carrier. As a safety measure incoming loads remain in high position until lowered by operator depressing wall button.



Full bobbins are removed at weave room and empties returned. This system eliminates vast amount of hand trucking across street, on elevator and over long aisleways in departments of both buildings.

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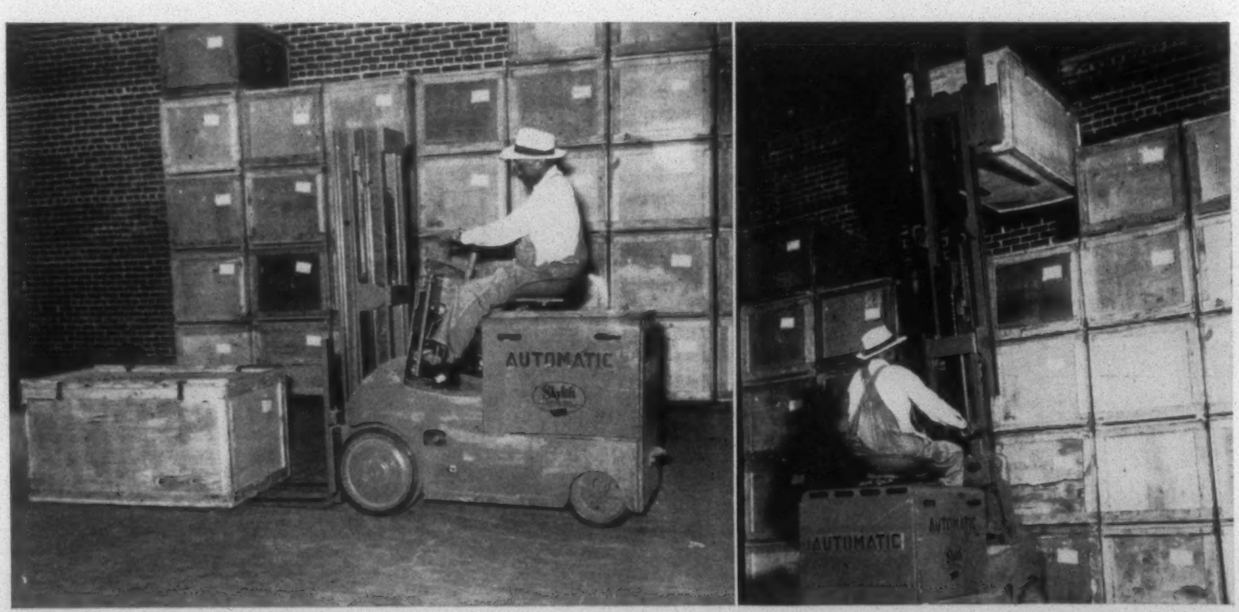
Hanes' Truck Pays For Itself

MODERN material handling saves the P. H. Hanes Knitting Co. of Winston-Salem, N. C., 6.15 cents on each bale of cotton used in the manufacture of the famed Hanes underwear and sportswear. Three men have been made available for more productive work. Crates of yarn, machinery, barrels and drums are all handled simply and economically without skids or pallets. Hanes officials predict the equipment will pay for itself within two years.

Those, briefly, are the results of the installation of just one modern electric fork truck at the Hanes, N. C., spinning plant of the firm, where raw cotton is processed into yarn preparatory to use in the knitting plant, according to Amos C. Johnstone, general superintendent of the spinning mill. Installed in March, the truck is a new 2,000-pound capacity Skylift, designed and manufactured by Automatic Transportation Co., Chicago. Originally installed primarily to tier, de-tier and haul cotton bales in storage and manufacture, the truck is now used for literally every handling process in the plant—including the storage and shipment of finished yarn.

Replacing a portable electric elevator, the fork truck handles an average of more than 75 cotton bales per hour with only four men at work, as compared with seven men when the elevator was in use. The three displaced laborers have been absorbed in more productive work and labor savings in the material handling operation total more than six cents per bale. Efficient material handling will thus pay

Companion at Hanes to the Skylift, this Automatic load carrier has been in operation at the Hanes Spinning Mill since March, 1926. During the intervening 21 years, the only major servicing performed was two battery replacements. The truck is still at work—side-by-side with the brand-new Skylift—hauling empty packing boxes and similar materials requiring neither lifting nor unit-load handling.

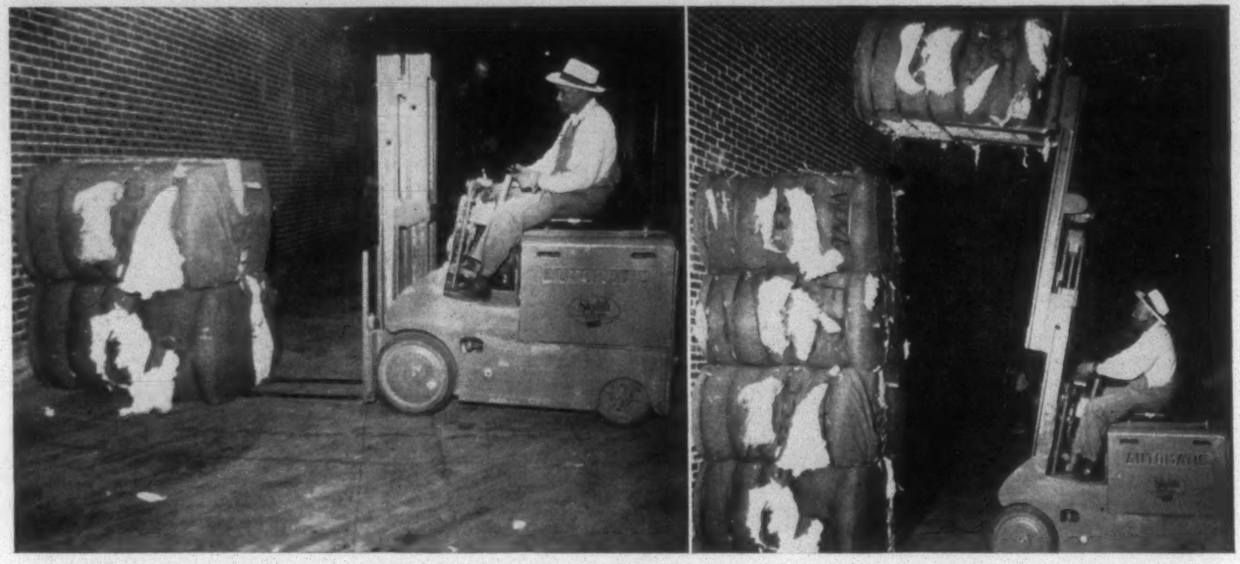


At left, crates of cotton yarn weighing up to 500 pounds each are stacked five high with the Skylift fork truck. The photograph shows how the operator chisels under a crate placed flat on the floor. After the forks have entered completely beneath the load, they are tilted backward to cradle the load for hauling. The Skylift is also used at Hanes to lift the crates and stand them on end. For this operation, the forks are driven only a few inches beneath the end of the crate, and by combined forward movement of the truck and raising of the forks the crate is up-ended until it sets on end—an operation demanding both highly-developed skill in the operator and sensitive controls on the truck.

At right, the fifth crate of yarn being stacked without assistance. The load will be lowered and the forks tilted slightly forward, after which the forks can be pulled out, leaving the crate in the desired position.

for itself on this one operation alone in approximately 3½ years.

Actually, however, the fork truck is busy handling cotton bales only about one-third of the day. The rest of the time, it is used in stacking and hauling crates of yarn and performing other varying handling operations around the plant—and building up additional savings. "We anticipate that the Skylift will pay for itself within two years at the maximum," Mr. Johnstone reports, "when the savings on these various other operations are considered—and after



At left, Skylift fork truck with two 36-inch chisel forks chiseling under two bales of cotton. This is standard operation at the Hanes spinning mill, where the entire material handling operation is carried on without skids or pallets. When the forks have been slid completely under the bales, they are tilted backward to cradle the bales for hauling. In the storage area, the forks are tilted slightly forward and the load lowered to the floor, so that the forks are easily pulled from underneath the load without moving the bales.

At right, two loads of two bales each have been piled on top of each other, leaving room for one more bale—the fifth one, being stacked in position above—beneath the sprinkler pipes. The Skylift's 130-inch lift leaves ten inches for maneuvering and forward-tilting for this operation, since the four bales already in position are 120 inches above the floor. The Skylift, Hanes officials report, is the only fork truck with a lift great enough to handle this type of operation and yet low enough when collapsed to go through standard seven-foot doors.

Nutting Floor Trucks, Rubber Wheels, Casters
Barrett Lift-Trucks, Skids, Portable Elevators
Elwell-Parker Electric Trucks and Tractors

Fig. 304

Fig. 11

Fig. 64-15

OVER 400 STANDARD
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Fig. 53

Fig. 310

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truck operating and maintenance costs have been subtracted from savings."

Operation at the Hanes mill is modern material handling in its simplest form. The fork truck is equipped with chisel forks, and both cotton bales and yarn crates are picked up and stacked without pallets or skids. All operations—unloading, hauling, stacking, de-tiering, and loading of shipments—are handled mechanically. Empty crates and other materials not requiring lifting or unit-load handling are moved with an automatic load carrier—which has been in use at the Hanes mill since its manufacture in 1926. The truck has operated continuously for 21 years, with two battery replacements being the only major servicing performed.

The Hanes material handling system was worked out by Mr. Johnstone and James A. Gray, Jr., Winston-Salem, material handling specialist and Automatic Transportation Co. representative.

The Skylift fork truck is shown above hauling two crates of finished yarn and loading them in a box car. The yarn is to be shipped from the spinning mill to the knitting plant, where it is used in the manufacture of Hanes underwear and sportswear. Most box cars have sufficient overhead clearance to allow the yarn crates to be loaded four high.

Bleaching, Dyeing & Finishing

Modern Textile Chemicals

By FRANCIS TRIPP, B.S., M.S., Ch.E., Head of Chemistry Department, New Bedford (Mass.) Textile Institute

THE finisher of textile fabrics is presently confronted with hundreds of textile specialties and products that have been introduced to the industry during the past 20 years. The application of these products to the various textile fabrics has resulted in imparting undreamed of qualities to the finished goods. On the other hand, the practical application of some of the newer textile specialties during the wet finishing processes has resulted in much greater efficiency in scouring, bleaching and dyeing operations.

Among the many new products now being successfully utilized during wet finishing processes are the surface-active compounds or the synthetic detergents. For many centuries soap was considered the outstanding and most efficient detergent. However, many years ago, it was found that soap was subject to certain limitations in its use, such as instability in acids and unsuitability for use in hard water. More than 100 years ago what may be considered to be the first synthetic detergent—Turkey Red Oil was introduced. This product was made by the sulfonation of olive oil. As a dyeing assistant it was found to be superior to soap in dyeing fabrics with Turkey Red. Later on sulfonated castor oil replaced the sulfonated olive oil and more highly sulfonated products were introduced which proved to have greater resistance to hard water, acids or alkalies. In this country cotton-seed oil and peanut oil have been successfully utilized in the preparation of sulfonated oils.

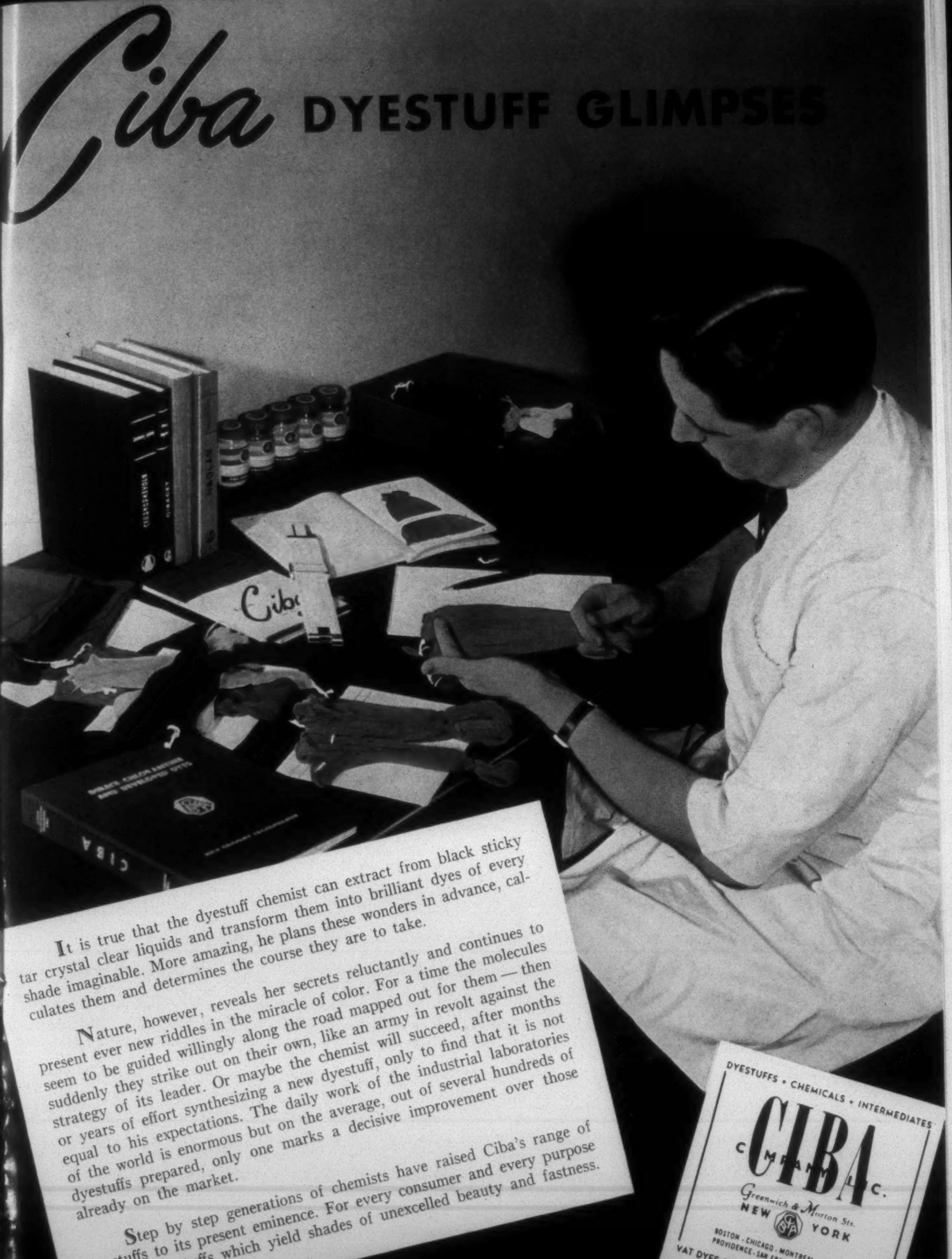
The shortage of natural oils and fats in Germany during World War I provided the necessary stimuli for their research chemists to synthesize the first of the newer synthetic organic detergents or surface-active agents from non-fatty sources. Since that time, and particularly during the past decade, hundreds of surface-active compounds have appeared on the market. These compounds have been introduced in order to overcome some of the disadvantages of soap and are much more resistant to mild acidity and hard water.

In general, we may consider these surface-active compounds to be highly complex molecules which possess two essential parts or radicals. One radical is termed "hydrophilic" and has water soluble properties. The other radical is called "hydrophobic" and tends to attach itself to or dissolve in oils, fats, waxes and non-polar materials.

The characteristic of any particular surface-active compound is governed by the balance or ratio of its hydrophilic and hydrophobic constituents. If the action of the hydrophilic portion is somewhat greater than the hydrophobic portion we get a wetting agent. If the balance between these two antagonistic groups is more nearly equal, we have a synthetic detergent. If the action of the hydrophobic group is dominant and the hydrophilic properties are also present to the proper extent, we get our emulsifying agents, softeners and dispersing agents.

Many types of wetting agents, detergents or softeners have been produced with molecular structures selected to give specific characteristics. Increasing the chain length of the non-polar portion decreases the solubility. The nature of the hydrophilic group can also be considerably varied to

Ciba DYESTUFF GLIMPSES



It is true that the dyestuff chemist can extract from black sticky tar crystal clear liquids and transform them into brilliant dyes of every shade imaginable. More amazing, he plans these wonders in advance, calculates them and determines the course they are to take.

Nature, however, reveals her secrets reluctantly and continues to present ever new riddles in the miracle of color. For a time the molecules seem to be guided willingly along the road mapped out for them — then suddenly they strike out on their own, like an army in revolt against the strategy of its leader. Or maybe the chemist will succeed, after months or years of effort synthesizing a new dyestuff, only to find that it is not equal to his expectations. The daily work of the industrial laboratories of the world is enormous but on the average, out of several hundreds of dyestuffs prepared, only one marks a decisive improvement over those already on the market.

Step by step generations of chemists have raised Ciba's range of dyestuffs to its present eminence. For every consumer and every purpose it offers dyestuffs which yield shades of unexcelled beauty and fastness.

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produce many compounds with different properties. Increased wetting power is obtained by placing the hydrophilic group near the middle of the molecule. The above mentioned examples illustrate only a few of the numerous possibilities for the production of many compounds with a wide diversification of properties.

Synthetic detergents can be electrolytes or non-electrolytes. If the main or active portion of the molecule is contained in the anion or negative portion the compound is termed "Anion-active." If the cation, or positive portion, contains the major or active portion of the molecule, the detergent is commonly called "Cation-active." The third group consists of "Non-ionic" compounds. Among the well known Anion-active compounds are the alkyl aryl sulfonates such as the Nacconol NR and the sodium alkyl sulfates represented by the Duponols. Well known Cation-active compounds are the SAPAMINES, manufactured by Ciba and recommended as softeners, fixatives for direct dyes, and levelling agents for basic dyes. As a whole, the cation-active type of synthetic detergent is not adapted for use on textiles where ordinary detergency is the prime factor.

Most textiles are anionic in nature and would tend to absorb the cationic detergent from solution. Some of the cation-active agents are considered to be very powerful antiseptics and are widely used for washing dishes and other utensils. Cationic softening agents are in wide use as they are absorbed by textiles from dilute solutions and are oftentimes quite stable to repeated washings.

The non-ionic compounds are coming more and more into use. Some of these are soluble in both water and oil. The ethylene oxide condensation products are perhaps the most widely known. Some of the more recently introduced non-ionic surface active agents are: Triton C-50; Warco A-162; Neutronyx 834; Quaker Polymene E-89; Cerfak 1300; Detanol PH and the Nopalcols. Blends of ionic and non-ionic detergents are also being offered the textile finishers. Variations in the blends provide specific characteristic properties.

Enzymes

One of the first processes in the preparation of cotton and rayon for bleaching and dyeing is to remove the starches, glue or gelatine that have been used for warp sizing during the manufacturing process. In most bleacheries, in order to conserve time and labor, the desizing of cotton fabric is done in the quench-box of the singeing machine. A double service is thus performed in a single operation—quenching any sparks that are present from singeing and impregnating the cloth with the enzyme.

In processing synthetics, the goods may be impregnated by use of a mangle or passing them through an open-width washer. In the bleachery it is a matter of what method is most easily available to impregnate the material most conveniently and at the proper temperature.

It is very important to follow out exact instructions of the producer of the particular enzyme, in order that it may function properly. Enzymes are particularly sensitive to changes in temperature and pH. It is therefore necessary to maintain carefully controlled conditions during the preparation of the water solution of the enzyme, during its application to the fabric and to the temperature of the bin or the J-box, where the cloth may be stacked while the enzyme exerts its action.

Little is known concerning the exact chemical structure of enzymes. The enzymes are produced by bacteria, plants or animals. Enzymes that solubilize starch are termed amylolytic enzymes, while those enzymes that act on protein material such as glue, casein and gelatin are known as proteolytic enzymes. Both the amylolytic and proteolytic enzymes can be produced from bacteria in commercial quantities at the present time. In general, the procedure is to make up a culture medium, using nutrients on which a certain strain of bacteria thrives. In the production of amylase and protease, Bacillus mesentericus is sometimes employed. The culture medium consists of peanut cake, soybean cake, mineral supplements and dextrins. After proper sterilization, the medium is inoculated with a pure strain of bacteria. The inoculated medium is then placed in shallow trays in an incubator where carefully controlled conditions are maintained. After about a week at a temperature of 30° C. the nutrient is centrifuged, the clarified liquid collected, cooled and stored at a low temperature. It may then be concentrated by distillation in vacuo.

Malt diastase, an important commercial enzyme, is produced by the cells of germinating barley seed and is obtained by extraction with water. Enzymes may also be produced from molds, particularly the Aspergilli. The molds are cultivated on a specially prepared culture medium consisting mainly of bran. After incubation the mass is extracted with water and filtered. The enzyme may then be precipitated with alcohol and dried. The pancreatic glands from animals slaughtered for meat are an important source of animal diastase.

The above-mentioned methods are some of those employed in the commercial production of enzymes. We have seen that they are produced by the cells of animals, plants and bacteria. In some cases the enzyme is secreted by the cell and acts upon substances outside the cell. In other cases the enzymes are retained within the cell wall and may be obtained by mincing the cell.

Enzymes may be classified as organic catalysts and are the product of living cells. They are colloidal in nature and react chemically as proteins. They are also specific in their action. In naming enzymes, it is customary to give the particular enzyme the name of the substance on which it acts, together with the suffix "ase," such as proteinase or amylase. Enzymes are permanently destroyed by high temperatures. They are only inactivated by low or freezing temperatures. Drying inactivates enzymes without destroying them, provided that the drying is carried out at a low temperature.

Some enzymes react best in slightly acid medium, while others react more efficiently in an alkaline medium. In some cases the presence of certain salts increases the activity of the enzyme.

A practical method of desizing with Rapidase is to use a three bowl padder or a box machine. A solution containing 25 pounds of Rapidase in 100 gallons of water is prepared and heated to 180°-185° F. The goods are then run through this solution in the padder or box machine and piled into a truck. They are then passed through a mangle, where very hot water is used to remove the soluble starch.

Exsize is another widely known desizing agent and is a concentrate of the natural enzymes of barley malt. It is a light straw colored liquid that mixes easily with water and contains both the liquefying and saccharifying enzymes which act on starch. On impregnating the goods with this desizing agent, it is customary to make a solution containing between one and three per cent of Exsize. Water is heated to a temperature of about 120° F. and the desired amount of desizing concentrate added and stirred in. The bath is maintained at a temperature of 120° F.-130° F. while the cloth is passed through. It is customary practice to impregnate the material to be desized with enough of the desizing solution to produce a pick-up equal in weight to the cloth. As in the case of most other enzymes, the cloth can be piled in bins, trucks or other suitable containers in a warm atmosphere, where the action of the enzymes are allowed to proceed. The cloth is then rinsed thoroughly as described above.

Some enzymes are purchased in the form of a dry powder. The manufacturer usually supplies the necessary information concerning their use, such as concentrations to use, temperature and storage time. Most of the preparations are mixtures of amylolytic and proteolytic enzymes. Some of the commercial mixtures of enzymes offered to the trade at the present time are:

Hydrolase D	Jacques Wolf & Co.
Solvose	B. P. Ducas Co.
Polyzyme P	Takamine Laboratory
Katozyme	Takamine
Dyastazyme	Jacques Wolf & Co.
Rapidase	Wallerstein Co.
Protozyme P X	Jacques Wolf & Co.
Neozyme	Royce Chemical Co.
Diastafor	Standard Brands
Exsize	Pabst Sales Co.

In future articles the author will discuss other finishing materials such as water repellents, fireproofing and flameproofing agents, Mildew-proofing agents, moth repellents and other textile chemicals presently utilized in the preparation of modern textile fabrics.

They Built A Business

By GEORGIA W. LEFFINGWELL, Ph.D., and OLIVE-SUE LINKLETTER, A.M.

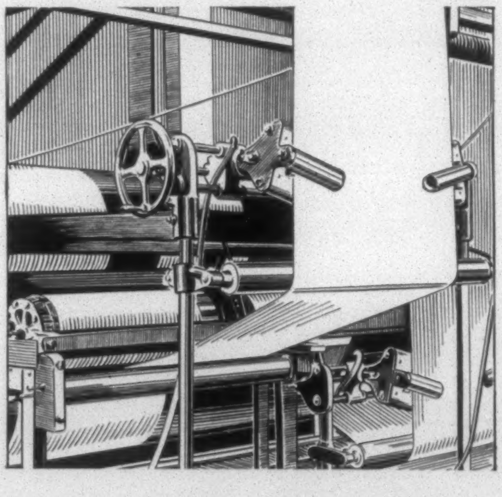
IT started with an advertisement in one of the textile publications. It grew within two years into a highly successful textile business. It's a story of interest to everyone in the textile field, of especial interest to the small business with limited capital and facilities. It's a story of the ambition and initiative of two enterprising ex-service men.

In 1945 W. A. Sherrill and Jules White were just out of the service. They had successfully helped to finish one very important job—the job of winning the war. Now they were ready to take on another job—a job for themselves. So they put away their uniforms, put on their civies, and thought about what they wanted to do next. Like so many of us the answer was a business of their own. Mr. White was an experienced artist-designer. Mr. Sherrill knew textiles. So they rolled up their figurative sleeves and set up a textile screen printing plant under the names of Jules White Fabrics. It was the first textile printing plant in Houston, Tex., and they were very proud of it.

They began by using the conventional dyestuffs. That meant complicated procedures of dye fixation and development. It meant ageing and steaming and washing equipment, and such equipment was quite an expense. Expense like that is a bug-a-boo to a young business just getting off to a start.

Another worrisome factor was that various difficulties might so easily develop in the course of these treatments with disastrous results in the way of off-shade colors and so on. That meant unsatisfactory work, in the light of the high standards they set for themselves. "We soon became acquainted with the inherent problems involved in using conventional dyes and cook-up pastes," said Mr. Sherrill ruefully.

So Mr. Sherrill read the textile trade magazines carefully every month with an alert eye for any new developments or suggestions that might be helpful in solving these problems. Then early in 1946 he found the answer in an advertisement of *Aridye* pigment colors and clears which were first introduced to the textile industry only ten years ago. Mr. Sherrill had been pretty busy during those past few years with other



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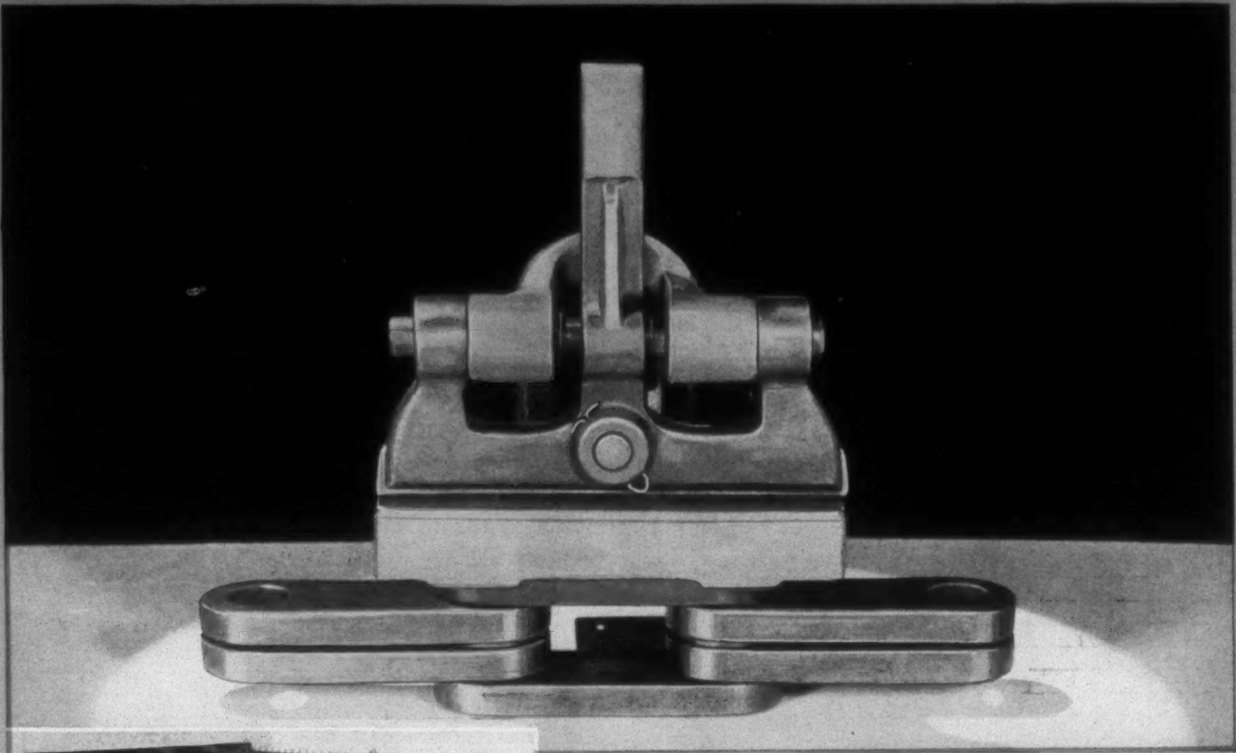
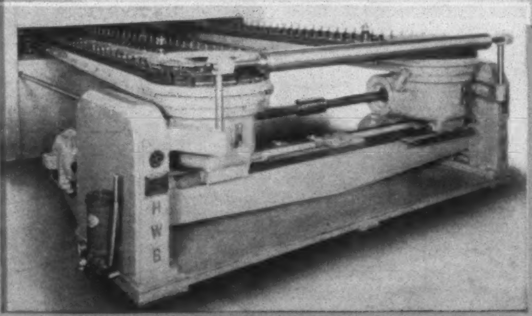
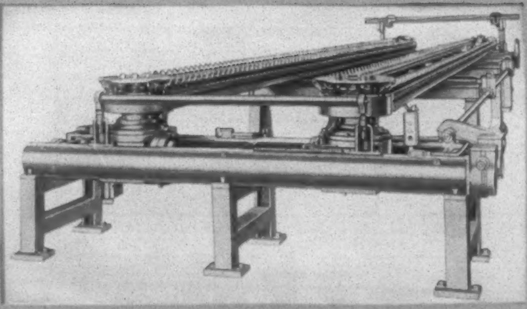
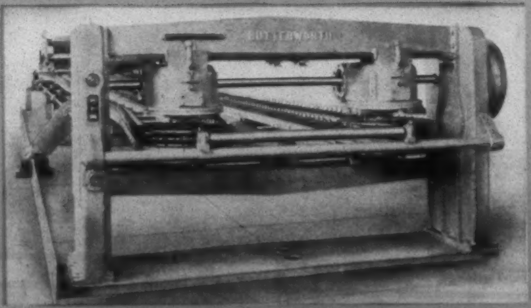




High Speed Tenter



Standard Straight Automatic Tenter



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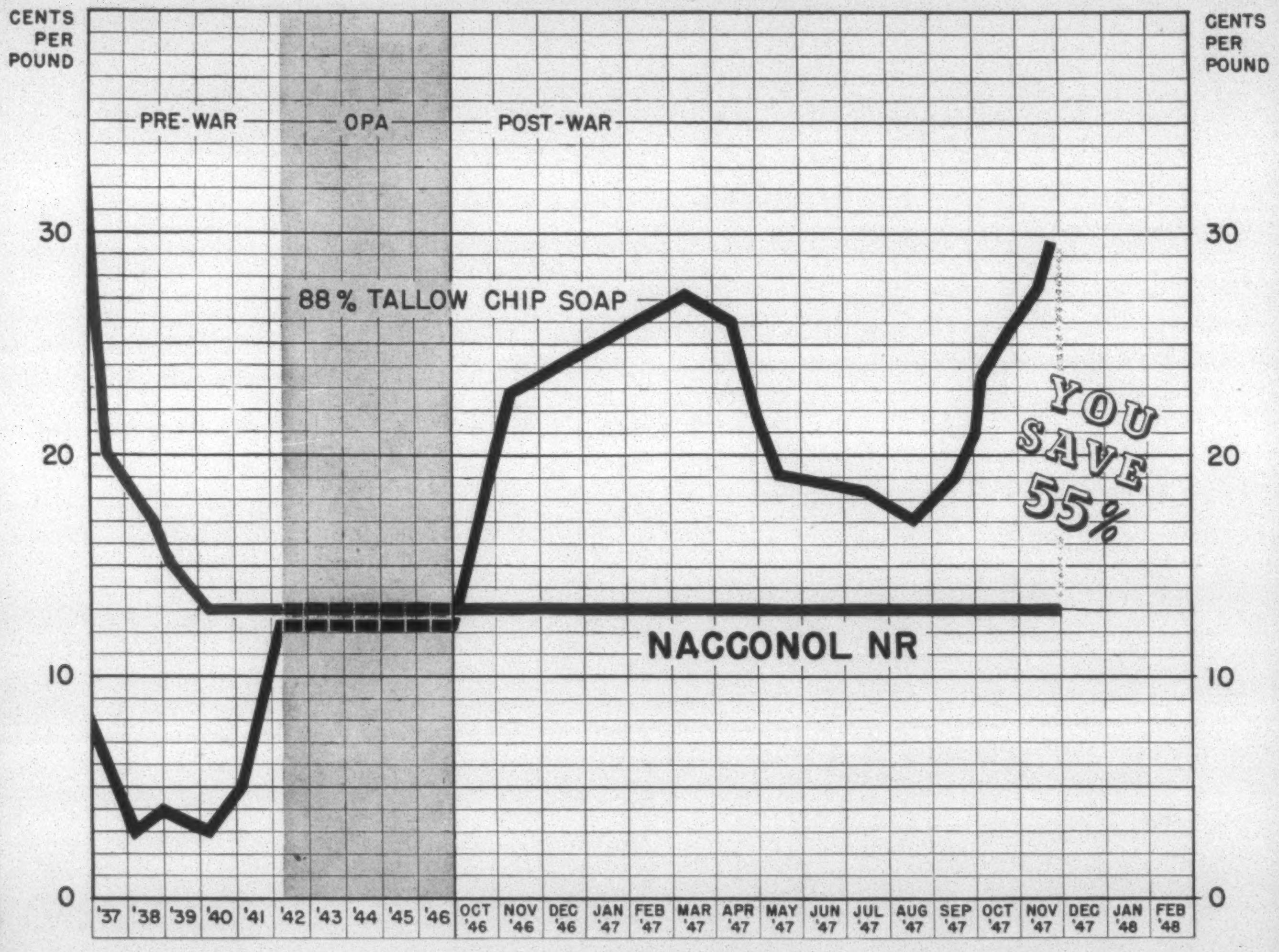
Pictures Speak Louder than Words

COST COMPARISON - NACCONOL NR vs SOAP



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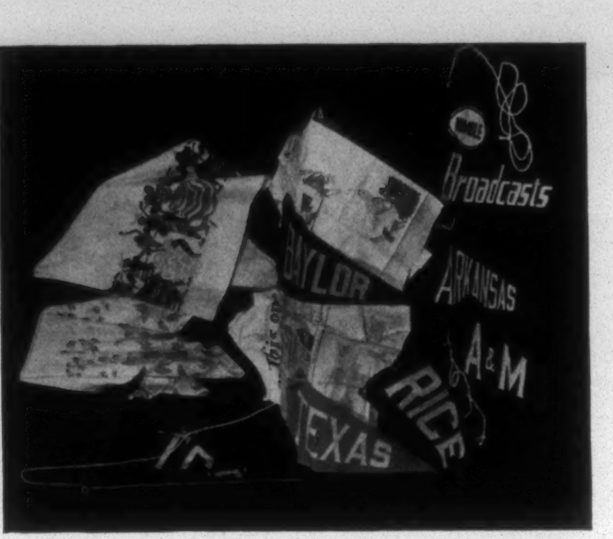
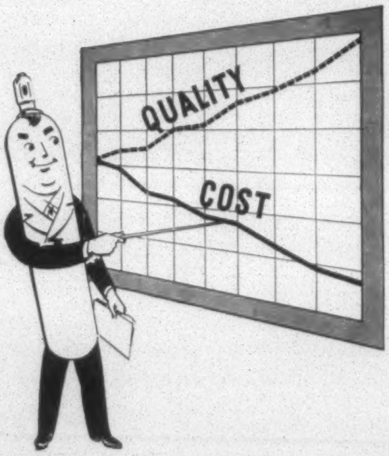
Jules White, left, and W. A. Sherrill, right, looking over one of their original prints.



Samples of the type of work being done by Jules White Fabrics in the plant at Houston, Tex.

things. Mr. Sherrill read the advertisement once with growing interest. Then he read it again very attentively. He read it to his partner. "We were immediately struck," he explained, "with the features that pigment colors and clears offered a small plant with limited facilities and know-how, so we wrote for a trial batch."

"As soon as they arrived," he went on, "we tested the various colors and clears by the recommended procedures. If they worked as claimed, we knew we had the solution to a lot of our headaches. And they did just that. First of all, we found that a fine-line drawing could be reproduced through a photographic screen with unusual clarity. That was important. But that wasn't all.



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Yes...Solvay Liquid Chlorine gives you DEPENDABLE LOW-COST BLEACHING!

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"We found that through control of viscosity of the printing emulsion we could obtain good color yield, penetration and fineness of line and received the further benefit of blended colors when skillfully overprinted. Then came the question of drying. If we could really eliminate ageing and steaming, that in itself would be a very great advantage over previous methods. We were delighted to find that drying was relatively speedy even on an unheated print table. After printing with pigment colors, the cloth can be dried at room temperature and then run through a comparatively inexpensive curing oven. No other treatment is needed after printing, as far as the colors are concerned."

But the advantages of these pigment colors did not stop there. Others were revealed in the course of practical usage, which Mr. Sherrill believes should be of general interest. "For example, 'hand,' an old problem to all textile printers," emphasized Mr. Sherrill, "has been admirably solved by the pigments and clears we are now using. Also, in using these materials, the costly and space-using wash equipment needed to remove paste from newly printed goods has been eliminated. Washing being unnecessary, an obvious advantage results; the customer receives the colors as bright and fresh as they left the print table, there is no loss of color at any time."

The geographical location of the plant in Houston also brought up further points for consideration. These emulsions were fine to work with, but how would the screen printed colors stand up under the glaring sun in that part of the country? How about storage of the colors in that hot humid climate? Storage did not prove a problem; in fact, these colors offered some definite advantages from the standpoint of resistance to deterioration and requisite space. "With the pigmented emulsions we use instead of dye pastes we have reduced our storage problem to *three* items, the concentrated color, the concentrated clears, and a petroleum solvent—and water from the tap—as compared to the very considerable poundage of dyes, gums, starches and other materials required to make the pastes used in older methods of printing."

On the question of sunfastness and the general satisfaction obtained with the pigment colors, Mr. Sherrill said jubilantly, "we found that the colors withstand the bright sun of the Southwest excellently, further we have not had a single complaint about crocking."

Today Jules White Fabrics print not only cottons and rayons, but silks as well. These various fabrics are printed for dress goods, draperies, table cloths, scarves, cloth pennants and banners, to mention only a partial list of their products. The first textile printing shop in Houston has become a proud addition to the city's industry. That's the story.

A. A. T. C. C. Groups Elect New Officers

The Southeastern and South Central Sections of the American Association of Textile Chemists and Colorists at recent meetings elected new officers and discussed plans for the coming year, including plans for the national convention of the group to be held at the Sheraton-Bon Air Hotel, Augusta, Ga., Oct. 20-23. A round-up of news from the above meetings, including plans of the Piedmont Section for a Feb. 7 meeting at Greenville, S. C., follows:

Southeastern Section—Met Dec. 6 at the Ansley Hotel in Atlanta, Ga., and elected C. Russell Gill of Southern Sizing Co., East Point, Ga., chairman, to succeed A. Kempton Haynes of Rohm & Haas Co., Inc. Other new officers elected were Dr. Howard M. Waddle of the research division of West Point (Ga.) Mfg. Co., vice-chairman; S. Jack Davis, research department of Callaway Mills Co., La Grange, Ga., secretary; W. Fred Crayton, E. I. du Pont de Nemours & Co., Inc., treasurer; W. B. Griffin, Kali Mfg. Co., Atlanta, councilor. Members of the sectional committee are: George L. Dozier, Southern Dyestuff Corp.; Lee L. Baker, Tesco Chemical Co.; Paul G. Wear, Penick & Ford; and Robert L. Horney, Ciba Co. More than 75 members attended this meeting.

South Central Section—Met Dec. 13 at the Hotel Patton, Chattanooga, Tenn., and elected Dr. Raymond B. Seymour, director of the University of Chattanooga Industrial Research Institute, chairman, succeeding Jack Anderson of Peerless Woolen Mills, Inc., Rossville, Ga. Mr. Anderson, who had filled two full terms and part of a third as chairman, was given a rising vote of appreciation for his leadership. Other officers elected were J. A. Crumley, Hosiery Process Co., Rossville, vice-chairman; H. P. Loveless, Crystal Springs Bleachery, Chickamauga, Ga., secretary; Charles Gordon, Riegel Textile Corp., Trion, Ga., treasurer, and Mr. Anderson, national councilor. Oliver G. Edwards, head of the textile division of the University of Chattanooga Industrial Research Institute, was the principal speaker for the meeting and told the group that the American textile industry need have no fear of any competition from Germany for many years. Mr. Edwards recently returned to this country after having spent a year in Germany as one of a group of American textile men sent there by the government. A paper on "Effect of Urea on Cellulosic Textiles," was presented at the technical session by Dr. Seymour.

Piedmont Section—Will hold its winter meeting Feb. 7 at the Poinsett Hotel, Greenville, S. C. Papers to be presented during the technical session include "Current Processing Problems of Acetate and Viscose Rayon Fabrics," by Herbert G. Scull, manager, Fabric Dyeing Service Laboratory, A. M. Tenney Associates, Inc., New York, and "Package Dyeing of Yarn," by Herman J. Jordan, Jr., of the yarn dyeing division, Wiscassett Mills Co., Albemarle, N. C. The banquet session, to begin at 7 p. m., will be presided over by John B. Neely of Burlington Mills Corp. V. B. Holland of Cannon Mills Co. recently has been appointed chairman of the Sectional Advisory Research Committee of the Piedmont Section. Other members of the committee are Dr. R. E. Rupp of Pacific Mills, Charles E. Ordway of Burlington Mills Corp., Linton C. Reynolds of Riegel Development Laboratories; and Hobart Souther of Proximity Print Works.

The committee on ageing of textiles of the A. A. T. C. C. has recently been reorganized. Members of the committee are: J. D. Dean, Southern Regional Research Laboratories, chairman; W. D. Appel, National Bureau of Standards; K. H. Barnard, American Cyanamid Co.; W. H. Cady, United States Finishing Company; Mary A. Grimes, Texas Agricultural Experimental Station; Dr. J. F. Oesterling, Philadelphia Quartermaster Depot; Dr. W. M. Scott, Southern Regional Research Laboratories; Col. F. M. Steadman, Philadelphia Quartermaster Depot; and Julian Maas, co-operating non-member, Brooklyn Naval Clothing Depot.

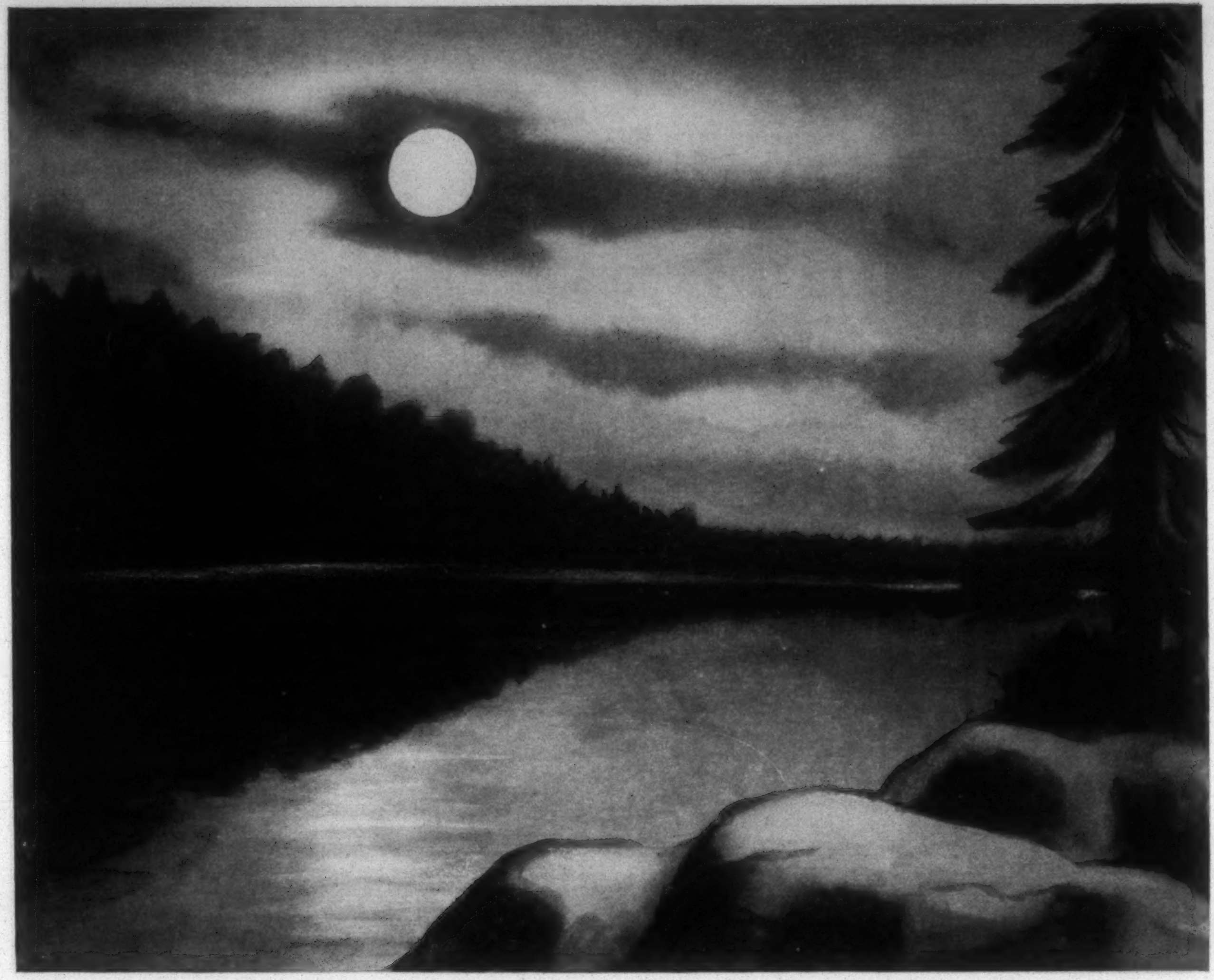
Liles Heads Carolina-Piedmont A. C. S. Unit

B. S. Liles of Carolina Aluminum Co. at Badin, N. C., has been elected chairman of the Carolina-Piedmont Section of the American Chemical Society, succeeding Dave E. Truax of Stein, Hall & Co., Charlotte, N. C. Other new officers are Norman D. Doane, Permutit Co., Charlotte, chairman-elect, and Francis K. Burr, Monsanto Chemical Co., Charlotte, secretary-treasurer. Dr. Charles H. Stone of Charlotte was named to the national council of the society for a three-year term and David F. Mason of Southern Dyestuff Corp., Mount Holly, N. C., was appointed his alternate. Dr. Laura T. Hall of the Kendall Co., Paw Creek, N. C., was elected to serve as a member of the section's executive committee for three years.

English Firm Develops New Dyestuff

The Manchester Cotton Board recently announced the development of a new dyestuff, Alcian Blue, by Imperial Chemical Industries, Ltd. The board expressed the opinion that the new product would prove an "attractive and a powerful aid to the British textile industry's export drive." The new color was scheduled to be exhibited at Manchester, England, from Jan. 14 to Feb. 7 at the color design and style center of the cotton board, when both its technical development and application to dress and furnishings fabrics was to be shown. Until a new plant for manufacture of the dye can be constructed by Imperial Chemical Industries, production will be spread over various plants in England and Scotland.

A new type of textile printing whereby as many as 100 shades can be incorporated in a single design was to be exhibited in the United States this month by three representatives of a Manchester textile house. The new process enables the dyes themselves to make actual contact with the cloth without having to penetrate thick gums or other substances, it is reported, and can be used on either flat surfaces or pile fabrics. From three primary colors it is stated that approximately 3,800 shades have been evolved and used.



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MILL NEWS

CONSTRUCTION. NEW EQUIPMENT. FINANCIAL REPORTS. CHARTERS. AWARDS. VILLAGE ACTIVITY. SALES AND PURCHASES

WELDON, N. C.—Weldon Knitting Mills, Inc., which has been closed for some months, is scheduled to re-open in February. Now owned by Carolina Mills Co. of Dillon, S. C., the plant will utilize 2,000 spindles in producing coarse threads. Eventually it is expected that 8,000 spindles will be used in producing 60,000 pounds of yarn per week.

CHERRYVILLE, N. C.—Howell Mfg. Co. is spending $170,000 in expanding its manufacturing facilities. Addition of 1,000 new spindles will increase the total number to approximately 13,000. New card room machinery and long-draft spinning equipment also is being installed.

LUMBERTON, N. C.—M. S. Dayan of New York, owner, has notified city officials that "every consideration" would be given to re-openings Jennings Cotton Mills, located in North Lumberton. No definite action is expected, however, until Mr. Mayan's return from a business trip to the Philippine Islands.

MARSHVILLE, N. C.—An addition to the Carolina Asbestos Co. plant here will triple the plant's floor space and make it a completely integrated operation. Carding and spinning equipment will be installed in the mill, which previously had operated only weaving machinery in the production of asbestos textiles. Carolina Asbestos is a division of the Union Asbestos & Rubber Co., Chicago.

ROCK HILL, S. C.—Celanese Corp. of America opened an employment office here Jan. 8 to hire approximately 2,500 persons for its $39,000,000 rayon plant, which is expected to be completed in June.

CHERAW, S. C.—J. P. Stevens & Co., Inc., has purchased a tract of land at Kollocks, two miles east of Cheraw, and plans construction of a $15,000,000 textile finishing plant on the property, it was reported recently. Site of the proposed plant is on the Seaboard Air Line Railway main line route between New York and Florida.

CHARLOTTE, N. C.—Marshall Mfg. & Processing Co. has been chartered to buy and sell textiles with an authorized capital stock of $100,000. Incorporators are Haywood Robbins, William Abernathy and Mary Boger, all of Charlotte.

CUMBERLAND, N. C.—Construction of a $100,000 addition to the Rockfish-Mebane Yarn Mills, Inc., plant here got underway several weeks ago. The new structure will be used primarily as a warehouse.

COWPENS, S. C.—Textile properties and equipment in Cowpens of Leading Embroidery Co., North Bergen, N. J., have been sold to the recently chartered Cowpens Cotton Mills, Inc., for $165,060. The transaction included property occupied by and adjacent to the Leading Cotton Mill plant, machinery, equipment and buildings forming the mill. The plant is listed as having 502 looms and 21,000 spindles. Officers of Cowpens Cotton Mills, Inc., are F. K. Hayes, president; M. P. Gaines, vice-president; and H. R. Wright, secretary and treasurer.

WEST POINT, MISS.—Aponaug Mfg. Co. early this month turned out the first piece of cloth ever to be woven in the mill. Full production on the new warp preparation machinery, recently installed in a spacious annex, is not expected to be reached, however, until mid-February.

SPINDALE, N. C. — Mil-Art Co., Inc., which has been operating 28 looms on draperies and upholstery goods, has completed a new building which will house about 220 looms. The firm will probably move its yarn mill which has 1,296 spindles, and is now located at Lincolnton, N. C., to Spindale. M. D. Haney is manager of Mil-Art Co.

SPRUCE PINE, N. C.—The large plant being constructed near Spruce Pine by Kalmia Braids, Inc., is nearly completed and operations are expected to begin about March 1 on the manufacture of shoe laces and cotton handkerchiefs.

ALTAVISTA, VA.—Pacific Mills announced recently that it plans to sell the 500-acre site near Altavista which it purchased in 1944 as the site of a proposed mill. In making the announcement, Pacific officials said the "purpose for which the land was intended has been given up."

CAMDEN, S. C.—Trade sources report that E. I. du Pont de Nemours & Co., Inc., may erect a synthetic yarn plant near here at an estimated cost of more than $10,000,000. Company officials have conferred with Camden city officials concerning the proposed plant, however, it is stated that sites elsewhere in the nation also are under consideration.

GASTONIA, N. C.—Construction is expected to begin soon on an addition to Ragan Spinning Co. to cost approximately $160,000. No new spindles are being added. The addition was necessitated due to a change in production from a very fine count combed yarns to a somewhat coarser count requiring additional floor space in the carding department for supplementary preparatory machinery to balance the productive operations.

MILLEDGEVILLE, GA. — The naval ordnance plant here, which at the peak of its operations during the war employed 15,000 persons, is expected to be leased soon to J. P. Stevens & Co., Inc., for the manufacture of textiles.

KERSHAW, S. C.—Construction has begun on an addition to the combed broadcloth plant of Springs Cotton Mills here. The one-story brick addition will be 120 by 200 feet and the building and its contents will cost approximately $500,000. It is expected to be completed in six months.

CARROLLTON, GA.—An addition has been built at the northwest corner of Carroll Mills, on Bradley Street in Carrollton, to house general offices of the company, according to P. L. Shaefer, general manager and treasurer. The addition was constructed of brick and extends to the sidewalk. It contains an office for Mr. Shaefer and quarters for the mill's office staff. Caroline Mills, in which Mr. Shaefer previously had his office, was sold recently.

HUNTSVILLE, ALA. — Projected improvements, expansion and modernization of the No. 1 Plant of Huntsville Mfg. Co. will cost approximately $1,500,000, according to a recent announcement by M. Lowenstein & Sons.

CONESTEE, S. C.—Blackinston Mills, Inc., now has moved all its manufacturing operations from North Adams, Mass., to its plant here. Preferred stock of the firm, representing money subscribed in North Adams to get the mill back into operation under new ownership in 1940, was called for redemption Dec. 31. Holders were notified that the stock would be redemed at $100, plus $3 interest for each share.

GLENDALE, S. C.—Effective Jan. 1, the corporate name of the D. E. Converse Co. was changed to Glendale Mills, Inc. All contracts and commitments of the company will be continued under the new name. Except for change of name, the business of the company will not otherwise be affected.

SPARTANBURG, S. C.—Officials of Arkwright Mills Jan. 12 announced plans for opening a 300-loom branch on a recently purchased 23-acre site at former Camp Croft, three miles from Spartanburg. Installation of equipment is underway and operations are expected to begin by early summer with O. A. Mace, formerly with Dominion Textiles, Quebec, in charge as general superintendent.

GASTONIA, N. C.—A. M. Smyre Mfg. Co. has announced expansion projects to be completed in 1948 as follows: Addition of 3,186 spindles to be devoted exclusively to the production of spun rayon, and enlargement of a warehouse which will be made into Plant No. 3. When the new plant goes into operation, probably in November, the company will have about 31,168 spindles; production will be about 75 per cent combed yarn and 25 per cent spun rayon, it was reported.

CHARLOTTE, N. C.—Catawba River Co., Inc., recently was chartered to manufacture cotton and woolen textiles with an authorized capital stock of $100,000. Incorporators are W. M. Nicholson, Edna Hutchison and W. J. Hutchison, all of Charlotte.

GREENVILLE, S. C.—F. W. Poe Mfg. Co. officially passed into new hands Dec. 30 as Ely & Walker Dry Goods Co. of St. Louis, Mo., took over operation of the mill. Earle R. Stall was re-elected president of the company at a meeting of the new directors. W. W. Rodgers was named vice-president, C. L. Steadman was re-elected secretary, and

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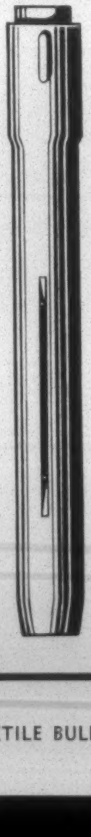

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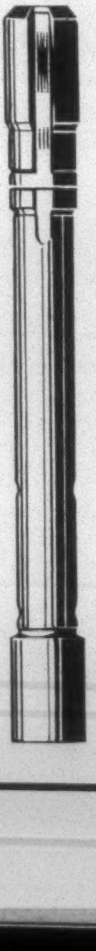


Walter R. Chandler was named treasurer. All the above officers of the company live in Greenville. The new board of directors includes E. P. Cave of St. Louis, head of the dry goods firm; M. Weldon Rogers of St. Louis; Charles A. Gibson of Calhoun Falls, S. C.; Marcus W. Carter of Tarboro, N. C.; Mr. Stall, Mr. Rodgers, Mr. Steadman and Mr. Chandler. Mr. Stall announced that the mill would continue operations under the new set-up with no change in production of cotton print cloth.

BIRMINGHAM, ALA.—Palmer Bros. Co., local cotton mill, is being offered for sale and may be scrapped, it is reported in trade circles. The mill utilizes 58 cards, 644 broad looms and 29,504 ring spindles.

STANLEY, N. C.—Purchase price for Lola Mills, Inc., acquired last month by Carter Fabrics Division of J. P. Stevens Co., was $900,000, according to a recent announcement. The plant operates 6,936 spindles in producing combed and carded yarns.

GREENWOOD, S. C.—Greenwood Cotton Mill and Mathews Cotton Mill, heretofore operated as separate organizations, were officially merged into one company Dec. 22 to be known as Greenwood Mills. The new company was chartered by the state as a $261,500 corporation. Both mills are at Greenwood and J. C. Self, Sr., is president of the new corporation.

CHARLOTTE, N. C.—An election held Dec. 10 at the Louise Plant of Textron Southern, Inc., to determine whether the employees desired labor union representation resulted in 235 votes against the Textile Workers Union of America, C. I. O., and 143 for the union.

DALLAS, N. C.—Gibson Yarn & Weave Mills has been sold to interests in New York City, according to W. H. Gibson, Jr., in announcing his resignation as president of the firm. Name of the purchaser was not announced. The mill was incorporated in July, 1947, with Mr. Gibson, G. B. Mason and O. F. Mason, Jr., as subscribers and incorporators.

LA FRANCE, S. C.—Pendleton Mfg. Co., formed by the merger of Blue Ridge Yarn Mills and Pendleton Mfg. Co., has been chartered with a capital stock of $200,000 and Richard R. Candler of New York as president. Both firms are subordinate units of La France Industries. Other officers of the new firm are D. J. R. Sufferdini, vice-president and treasurer; F. M. Gerli of New York, secretary; and J. W. McKinney, assistant secretary. Directors are R. C. Cramer of New York, chairman of the board; Paolini Gerli, William P. Dunn, P. H. Mueller, J. P. T. Armstrong, all of New York; Charles E. Daniel of Greenville, S. C.; Mr. Candler and Mr. Sufferdini.

EASLEY, S. C.—Easley Cotton Mills, with plants at Easley and Liberty, S. C., is now wholly owned by Woodside Cotton Mills Co., Inc., of Greenville, S. C., following the purchase by Woodside interests of $1,100,000 of preferred stock outstanding, William H. Beattie, president of Woodside and Easley, said recently. All of the preferred stock was in by Dec. 31, Mr. Beattie said. The Woodside concern had previously purchased $450,000 worth of Easley common stock outstanding, he stated.

CHARLESTON, W. VA. — A $1,250,000 wool textile mill to be known as Varel Mills, Inc., has been incorporated in West Virginia. The firm's mill is being built at Middleway, Jefferson County. Among the incorporators were Wesley V. E. Terhune of New York, president of the Virginia Woolen Co. at Winchester, Va., L. I. Rice of Martinsburg, W. Va., and L. G. Sjostrom of Winchester. Varel is to maintain selling offices in New York after operations begin.

Avisco Safety Record In November Cited

November was the safest month in the history of the American Viscose Corp., Abbot Smith, Sr., head of the corporation's safety division, said recently. In November there were only two lost-time accidents in all of the corporation's seven rayon plants where a total of 19,310 persons worked 3,223,819 man hours. The safest previous month was last April, when there were exactly three times as many lost-time accidents. One accident was at Parkersburg, W. Va., and the other at Front Royal, Va. The Parkersburg employee was laid up 14 days when a lead gear box he was helping to carry slipped and fell on his foot, fracturing a toe. At Front Royal one man lost one day when he got something in his eye while working on spinning machine exhaust dampers.

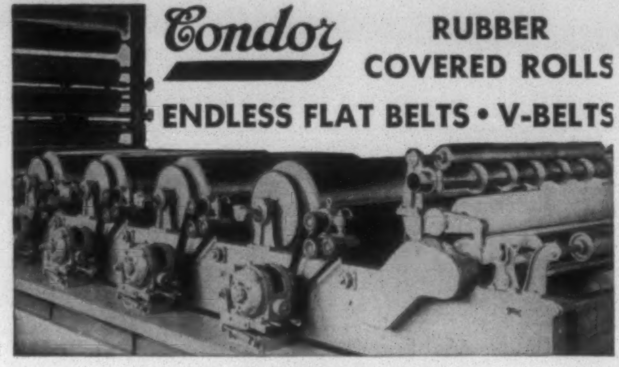
Mr. Smith said that the prime credit for the corporation's excellent safety record should go to all the corporation's employees. Of major importance, he said, are the shop safety committeemen. There is usually one for each shift in each shop in every plant, he emphasized. They look for unsafe acts and conditions and report them to the plant's safety supervisor. The safety supervisor corrects the situation if he can. If it is complicated, he takes it up with the plant's safety council which meets monthly or oftener. The council comprises members of the plant manager's staff and department heads. Every lost-time injury is analyzed the day it occurs for the benefit of all the plants.

Industrial Rayon Corp. Issues Booklet

A 24-page illustrated booklet which graphically portrays the highlights of Industrial Rayon Corp.'s continuous process and the special characteristics of continuous process yarns has just been published under the title *Rayon Mile By Mile—Perfect Inch by Inch!* The 8½x11 booklet depicts the various steps in continuous process manufacture of yarn in photos and flow charts, and includes textile and tire production scenes which show how inch by inch perfection means better production in plants using continuous process yarn and tire cord. Specific functions performed by thread advancing reels during the various stages of continuous process production are matched to the comparable steps in conventional discontinuous package processing in the center spread, which unfolds to present the 19-foot over-all height of the continuous process machine in proper perspective. Copies of the booklet may be obtained from Industrial Rayon Corp.'s sales office, 500 Fifth Avenue, New York City, and from their general offices in Cleveland, Ohio.

Puerto Rico To Get Big Print Cloth Mill

Royal Little, president of Textron Incorporated, and Teodoro Moscoso, Jr., president and general manager of Puerto Rico Industrial Development Co., announced recently the signing of a contract which provides for the establishment of a new 25,000-spindle print cloth mill in Ponce, Puerto Rico. The provisions of the contract, signed in New York, call for the construction by the Puerto Rico Industrial Development Co. of a complete greige goods plant capable of handling approximately 5,500,000 pounds of raw cotton per year and manufacturing the same into print cloth and allied fabrics. Estimated cost of the new plant including land, building and equipment, is approximately $3,500,000. The Puerto Rico Industrial Development Co., a semi-public corporation whose principal aim is to encourage private capital investment in that United States territory, is putting up all plant facilities and installing the necessary mill equipment of the most modern type and the manufacture of which has already been ordered. The new machinery for the mill has already started to arrive in Puerto Rico and construction work is scheduled to begin shortly.



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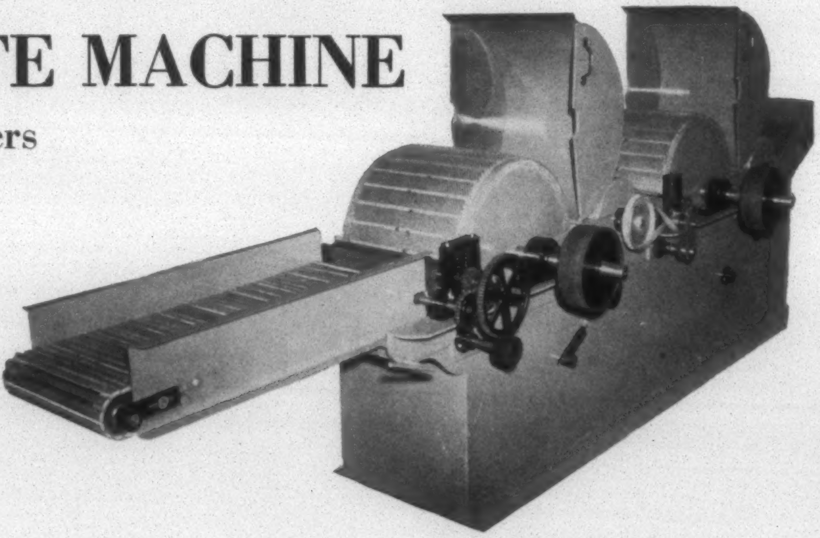

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PERSONAL NEWS

Samuel H. Swint of Augusta, Ga., president of the Graniteville Co. chain of plants in South Carolina and Georgia, has been elected a director of the Atlantic Coast Line Railroad. . . . . John P. Stevens, Jr., president of J. P. Stevens & Co., Inc., recently was named to the board of directors of American Brake Shoe Co. . . . . B. B. Gossett of Charlotte, N. C., a former president of the American Cotton Manufacturers Association, has been elected to the board of directors of Dan River Mills, Danville, Va. Mr. Gossett, who was one of the founders of the Cotton-Textile Institute and who has served on its board of directors since its founding, was president and treasurer of Chadwick-Hoskins Co. of Charlotte and the Gossett Mills of Anderson, S. C., prior to their purchase by Textron Southern, Inc. . . . . Hugh Comer, president and treasurer of Avondale Mills, Sylacauga, Ala., and chairman of the board of Boaz (Ala.) Mills, Inc., has been elected to the board of directors of Allis-Chalmers Mfg. Co., Milwaukee, Wis. . . . . W. J. Pharr, treasurer of Stowe Mills, Inc., and Pharr Worsted Mills, Inc., at McAdenville, N. C., has been elected to the board of directors of the National Bank of Commerce at Gastonia, N. C. . . . . T. M. Forbes, executive vice-president of the Cotton Manufacturers Association of Georgia, has been named a director of the First National Bank of Atlanta.

James H. Carver, left, has been appointed sales representative with Dary Ring Traveler Co. and has been assigned the North Carolina and Virginia territory. Mr. Carver was overseer of carding and spinning at China Grove (N. C.) Cotton Mills for several years and for the past six months was assistant superintendent at Green River Mills, Inc., Tuxedo, N. C. He will make Shelby, N. C., his headquarters. With the appointment of Mr. Carver, Reid Lockman of Spartanburg, S. C., who in the past has had the North Carolina territory, will now assist John Humphries of Greenville, S. C., in covering the industry in South Carolina.

Willis James, superintendent of Summerville (Ga.) Mfg. Co., has been elected mayor of Summerville.

M. H. Courtenay has been appointed assistant district manager of the Atlanta, Ga., office of SKF Industries, Inc. Mr. Courtenay, a native of Charleston, S. C., joined SKF in 1926.

George H. Dunlap, technical consultant in the School of Textiles at North Carolina State College, Raleigh, has been nominated by the Civilian Steering Committee of the Industrial College of the Armed Forces to attend a course on economic mobilization in Birmingham, Ala., Feb. 9-20.

Charles R. Harris has been elected to the presidency of Pneumafil Corp. of Charlotte, N. C. Prior to his promotion Mr. Harris had been serving as executive vice-president and general manager.

Robert T. Stutts, who for the past two years has served as superintendent of the Liberty, S. C., plant of Easley Cotton Mills, has been transferred to the superintendency of the Woodside Cotton Mills Co. units at Simpsonville and Fountain Inn, S. C. He exchanges positions with Carroll A. Campbell, who now is stationed at Liberty.

Thomas Starmont, left, has been appointed development manager of the Duscot Roll Covering Department of the W. D. Dodenhoff Molded Products Co., Inc., Greenville, S. C. Formation of this new company by W. D. Dodenhoff Co. marks the first step in an expansion program built around a new line of products which is being developed and introduced by this well-known Southern firm. He assumed his new duties Dec. 1, 1947, and is maintaining offices at the company's main plant at 619 Rutherford Street, Greenville, where many of the new items are procesesed.

J. Wilbert Wood, president of Industrial Cotton Mills Co., Inc., Rock Hill, S. C., has been named general manager of the Aragon-Baldwin Mills at Rock Hill, succeeding George P. McClenaghan. Both mills are subsidiaries of J. P. Stevens & Co., Inc., New York City. Mr. Wood will continue as president of Industrial.

S. R. Fuller, Jr., Jan. 15 announced his retirement from the boards of directors of North American Rayon Corp. and American Bemberg Corp. and as the corporation's consultant.

A. W. Gunn, who has been secretary and comptroller of Callaway Mills Co., La Grange, Ga., has been appointed treasurer and comptroller, taking over the duties of the former treasurer, J. K. Boatwright, resigned. . . . . Charles W. Allen, La Grange attorney, was appointed secretary to succeed Mr. Gunn.

S. Marshall Beattie is retiring as executive officer of Piedmont (S. C.) Mfg. Co., due to ill health. He announced that R. E. Henry would become executive officer, R. G. Henry, assistant executive officer; George P. McClenaghan, general manager, and that S. M. Beattie, Jr., would remain with the management.

J. Cantey Alexander, left, has been appointed to represent Frank G. North, Inc., and Pioneer Heddle & Reed Co., textile supply firms, in the Southeast. Mr. Alexander, a native of Alabama, is remembered as a tackle on the Georgia Tech football teams of the 1912-16 period. For the past 24 years he has been associated with Corn Products Sales Co., being in charge of sales in the South for the past ten years.

Durward Costner, formerly superintendent of printing for Reigel Textile Corp. at Ware Shoals, S. C., has been appointed director of research for Rock Hill (S. C.) Printing & Finishing Co.

R. A. Garner, who for some years has been connected with the mill supply division of Montgomery & Crawford, Inc., Spartanburg, S. C., as a salesman, has been promoted to general sales director of the firm.

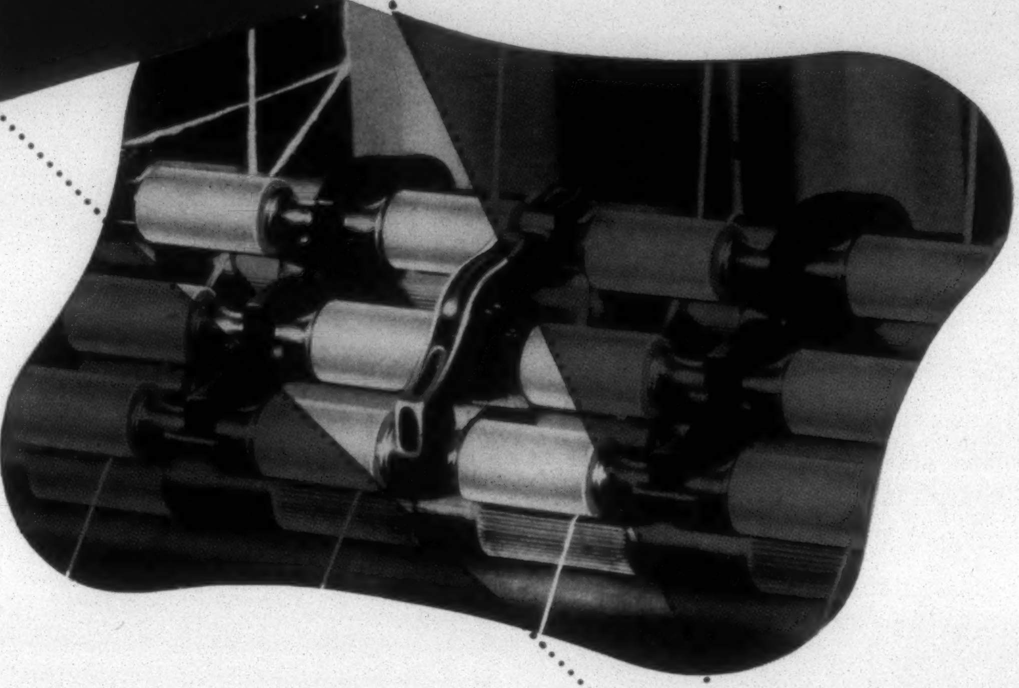
Boyd P. Chapman, superintendent of the Excelsior Mills plant at Rutherfordton, N. C., since March 15, 1947, has been transferred to the company's main plant at Union, S. C.

James Slayter, vice-president in charge of research and development of Owens-Corning Fiberglas Corp., has been chosen to receive the 1948 Industrial Research Institute medal presented for outstanding contribution to the field of industrial research. The presentation will be made Feb. 5, 1948, during the winter meeting of the institute at Rye, N. Y.

Leon Estes has been appointed superintendent of Rhodhiss (N. C.) Cotton Mills Co. No. 2 Plant to succeed H. G. Lyon, resigned.

Vice Admiral George F. Hussey, Jr., U. S. N. (Ret.), wartime chief of the Navy's Bureau of Ordnance, has joined the staff of the American Standards Association as administrative head of the organization. Admiral Hussey succeeds Dr. P. G. Agnew, who for the past 28 years has served A. S.

Daycos never groove, hollow out, flatten or distort



Dayco roll coverings are especially engineered with an extremely durable surface, perfect cushion and exactly the right coefficient of friction. That's why they won't groove, hollow out, flatten or distort, no matter how long they run . . . why they outlive all other type roll coverings.

Whether you use flat or revolving clearers, whether you draft cotton or synthetics, Dayco roll coverings will produce better quality yarn, more economically. A Dayton textile product engineer will gladly demonstrate these advantages to you. He'll call at your convenience. Write today, to Dayton Rubber, Dayton, Ohio, or *Textile Division—Main Sales Office, Woodside Building, Greenville, S. C.*

MORE REASONS WHY YOU SHOULD SPECIFY

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- Large reduction of ends down
- More of the foreign elements are removed from yarn
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- Same trouble-free service, for special types of synthetic and synthetic blends of yarn
- Not affected by humidity or temperature changes
- Oil resisting and static-free
- No grooving—less ends down
- Easy to apply

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THE MARK OF TECHNICAL EXCELLENCE IN NATURAL AND SYNTHETIC RUBBER

Waynesville, N. C. plant, devoted to manufacturing textile machine accessories to help you produce finer textiles more economically.

A. as secretary and head of the staff, and who will continue to serve the association as a consultant.

Charles Platt, manager and treasurer of Strasburg (Va.) Silk Mills, Inc., who was beaten and robbed of more than $4,000 Dec. 24, was reported to be in "very good" condition at a Winchester hospital where he underwent an operation for a depressed skull fracture.

Ralph M. Fischer has been appointed manager of technical service for the textile resin department of American Cyanamid Co. In his new position Mr. Fischer will supervise all field demonstrations in the New York, Philadelphia and Chicago territories, of resin and other new type textile finishes produced by the department. He will act as consultant in the New England and Southern areas. His duties will also include field work on new products development.

Dr. Wayne A. Sisson of the chemical research department of American Viscose Corp., at Marcus Hook, Pa., has been cited as one of the "ten ablest chemists and chemical engineers" in the cellulose field. *Chemical Bulletin,* published by the Chicago section of the American Chemical Society, called the roll in its November issue of the "ten ablest" in each of 20 specialized fields. Dr. Sisson's principal work has been in the relationship of molecular structures to fiber properties, in both cotton and rayon.

Fred Baumann, left, has been appointed sales manager of the dyestuff department of the Interchemical Corp. textile colors division. John Zelek has been named plant manager in the dyestuff department.

J. R. Frost of Hogansville, Ga., traffic manager of the U. S. Rubber Co., has been installed as president of the Atlanta chapter of Delta Nu Alpha Transportation Fraternity, Inc., succeeding J. E. Andrews of Atlanta. . . . . J. O. Corn, general manager and vice-president of Caro-Lin-Ian Mills, Inc., High Shoals, N. C., has been elected president of the Kiwanis Club of Lincolnton, N. C. . . . . G. C. Hargraves has been elected president of the Jefferson (Ga.) Mills Overseers Club; J. H. Varnum was named vice-president of the group; J. C. Spratlin, secretary, and Garnett Spratlin, treasurer. . . . . J. B. Templeton, superintendent of the Brandon Corp. Poinsett Mill, recently was elected president of the Greenville (S. C.) Textile Club, succeeding Frank Aiken of Judson Mills. Other new officers of the Greenville Textile Club are "Chick" McCall of Southern Weaving Co., vice-president; and Loui Greet and D. W. Stevenson, both of the Parker school system, named secretary-treasurer and assistant secretary-treasurer, respectively.

Wilton M. Todd, formerly manager of the Pelzer, S. C., plant of Kendall Co., has resigned that post to become general manager of Newberry (S. C.) Textile Mills where he succeeds Bruce C. Baker, who is becoming associated with Pacific Mills in Columbia, S. C. . . . . J. B. Baker of Charlotte, N. C., formerly connected with the Southern executive office of Kendall Co., succeeds Mr. Todd at the Pelzer plant.

Frederic A. Williams has retired as president of Cannon Mills, Inc., New York, selling agency for Cannon Mills Co., Kannapolis, N. C., and has been succeeded by Stanley Phillips, formerly executive vice-president. Mr. Williams will continue as a vice-president of Cannon Mills Co., the parent organization.

Fred M. Allen, Jr., a native of Gastonia, N. C., and for the past two years managing editor of *Southern Textile News,* is resigning that post and will join the public relations department of the National Cotton Council in Memphis, Tenn., Feb. 1.

P. W. Coleman of Greenville, S. C., has resigned his position as sales representative for Veeder-Root, Inc., in the Carolinas and Virginia, a position he has held for the past 11 years. His future plans have not been announced.

OBITUARY

Abel Caleb Lineberger, 89, pioneer fine yarn manufacturer in the South, died Dec. 29 at his home in Belmont, N. C., after a lingering illness. In addition to the more than a dozen yarn plants he managed actively until his death, Mr. Lineberger was president of Hatch Full Fashioned Hosiery Co. and Knit Products Corp. He is survived by four sons, three daughters, two sisters and 23 grandchildren.

Peter S. Gilchrist, 86, designer of chemical plants and retired chemical engineer, died Dec. 31 at his home in Charlotte, N. C. A consultant to American Cyanamid for many years, in the 1930s he became connected with Charlotte Chemical Laboratories, with which two of his sons, Peter and C. W., are now actively associated. Surviving are his widow, a third son and a daughter.

Lawrence G. Preston, 62, executive vice-president of American Maize Products Co., New York City, died recently after a long illness. Mr. Preston had been in the corn processing industry for 35 years. He is survived by his wife.

Harral O. Pierce, left, manager of the Charlotte, N. C., branch office of Solvay Sales Division, Allied Chemical & Dye Corp., died Dec. 28 of a heart attack following a brief illness. Mr. Pierce joined Solvay in 1910, was transferred to the New York executive offices of the firm as a division sales manager in 1929 and became manager of the Charlotte branch office in 1935. Surviving are his wife, a son, two daughters and a sister.

William Alexander Moorhead, 62, vice-president and general manager of Joanna Cotton Mills Co., Goldville, S. C., died Jan. 13 in an airplane crash near Washington, D. C. Mr. Moorhead became vice-president and general manager at Joanna in 1920 and under his guidance the plant grew from a small operating unit to the present large and modern plant. Well-known in textile circles throughout the South, Mr. Moorhead was also active in civic and religious groups. Surviving are his wife, one son, two daughters and three sisters.

Warren Freeman Cooper, 62, of Johnson City, Tenn., who was in charge of yarn service and quality control for Tennessee Eastman Corp., died recently. Mr. Cooper previously had been connected with the Duplan Corp. and American Viscose Corp. Surviving are his wife, four sons and a daughter.

John Belton Stroupe, retired official of Aragon (Ga.) Mills, died at his home recently.

Edward F. Lovell, III, 38, an executive of the Washington Mfg. Co., Tennille, Ga., died recently at his home in Tennille.

Elzy Erskine Smith, 79, Gastonia, N. C., who until his retirement in 1944 was connected with his son, Aulton B. Smith, in operating the E. E. Smith & Son textile machinery firm of Gastonia, died suddenly of a heart attack Jan. 12. Surviving are his wife, three other sons and two daughters.

Sidney Blumenthal, 84, chairman of the board of Sidney Blumenthal & Co., Inc., operator of textile plants in North Carolina at Rocky Mount and Wilson, died Jan. 5 at his home in New York City after an illness of six weeks. Surviving are his wife, a son, Andre, now vice-president of the firm, and two daughters.

Robert A. Douglas, 28, industrial supervisor for the Waynesboro, Va., plant of E. I. du Pont de Nemours & Co., Inc., died recently at a Charlottesville, Va., hospital. Mr. Douglas had been promoted to assistant area supervisor in the spinning area at Waynesboro, but died before the promotion became effective Jan. 1, 1948.

John Henry Mayes, 82, Charlotte, N. C., retired textile executive, died Dec. 17 after several years of declining health. A native of England, Mr. Mayes came to this country at the age of 14. At one time he was president of Cramerton (N. C.) Mills and the Ranlo and Priscilla Mills in Gastonia, N. C. Surviving are his wife, three daughters and one son.

Richard W. Arrington, 54, nationally known textile executive of Greenville, S. C., died Dec. 18. He had been in declining health for a year. Mr. Arrington became associated with Union Bleachery in Greenville in 1911, serving as superintendent, secretary and vice-president before succeeding his father as president of the bleachery in 1938. When Union Bleachery was purchased last spring by the Aspinook Corp. of Jewett City, Conn., and two affiliated companies, Mr. Arrington was elected a vice-president of the three companies and held the office at the time of his death. He is a former president of the National Association of Finishers of Textile Fabrics. Mr. Arrington is survived by his wife, two daughters, his mother, two brothers and one sister.

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STARCHES
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1907 — 1948
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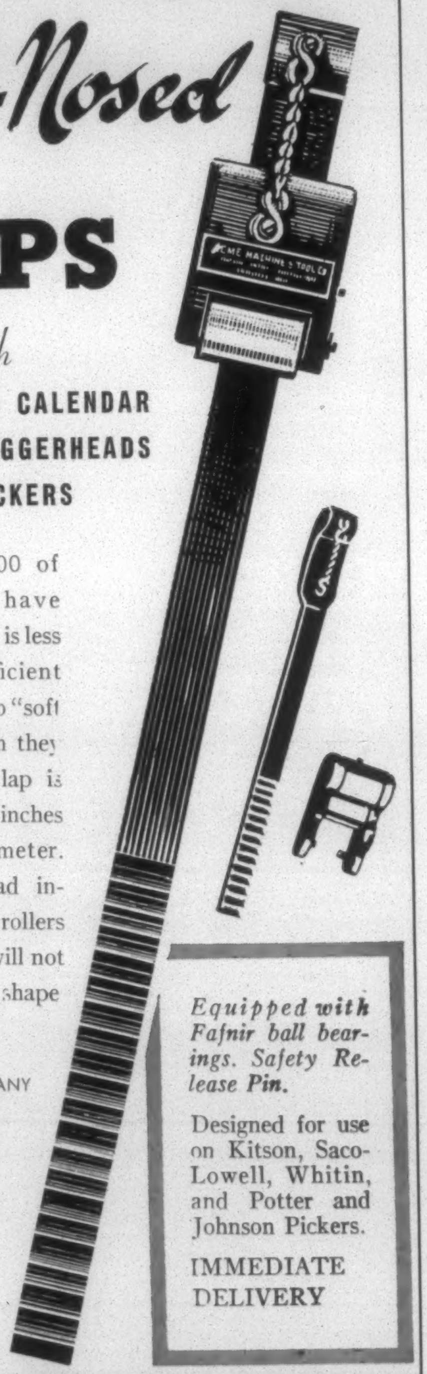
with
ROCKERHEAD CALENDAR RACKS OR LOGGERHEADS FOR PICKERS



More than 1,000 of these devices have proved that there is less waste, more efficient production and no "soft nosed laps" when they are used. Each lap is firm, being 2 to 4 inches smaller in diameter. Self-aligning head insures seating of rollers on lap pins and will not wear rollers cone shape

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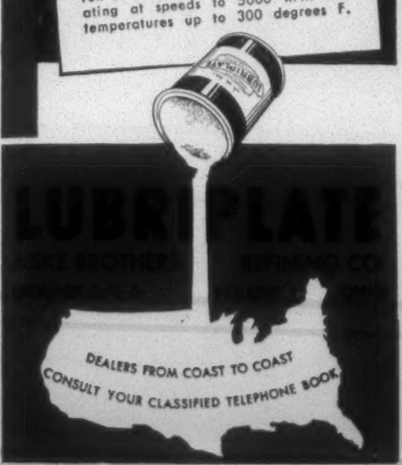
BALL BEARING — This is the LUBRIPLATE Lubricant that has achieved wide acclaim for use in the general run of ball and roller bearings operating at speeds to 5000 RPM and temperatures up to 300 degrees F.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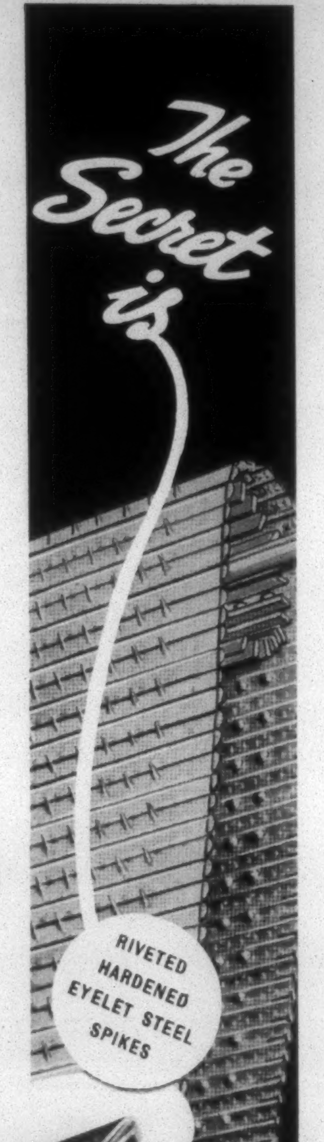
The new KNOTWOOD Aprons have been thoroughly tested and approved by leading mills. Their smooth, positive drive, simple, efficient construction and long life mean more and better production at less cost.

Built, installed and serviced in our Charlotte plant and offices.



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GEORGE A. FIELD, Manager

For The Textile Industry's Use

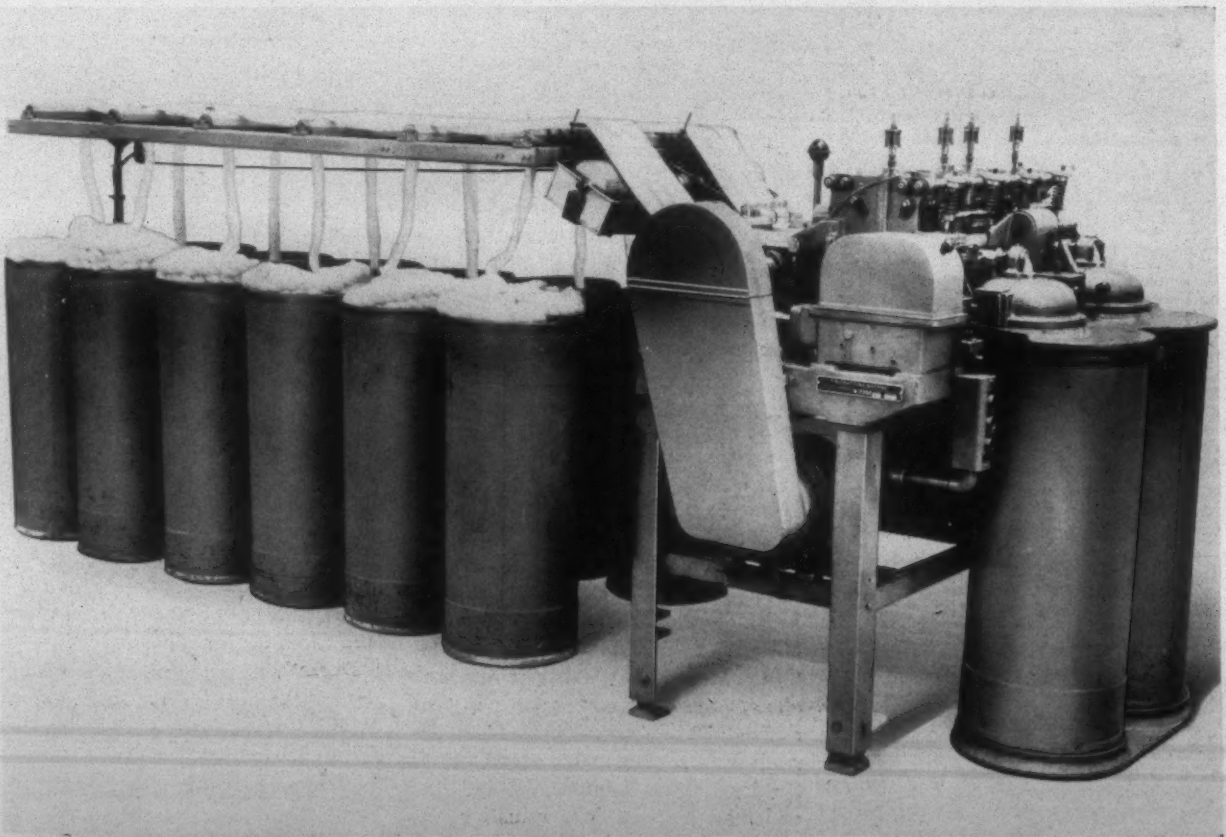
EQUIPMENT — SUPPLIES — LITERATURE

New Pin Drafting Machine Speeds Sliver Processing

A versatile new pin drafting machine, capable of producing high-integrity sliver with fewer operations than any other equipment, is now being produced in volume by the Warner & Swasey Co., Cleveland machine tool builder which also is adapting the Sulzer Swiss weaving machine for production in the United States. The new pin drafter, of which more than 175 are already in service, represents an advanced design of a screw gill, incorporating functions of the open-type drawing machine as well. The versatile new unit is thus capable of precision performance—in fewer steps—of all operations between combing and roving, in the American system of processing. In the Bradford system, the pin drafter takes the sliver to the reducing operation, accomplishing in five or six operations what conventionally would take eight or nine separate steps. The Warner & Swasey machine will handle straight wool, blends of wool with cotton or synthetic cut staple, and all those types of 100 per cent synthetic cut staple possessing induced or inherent crimp.

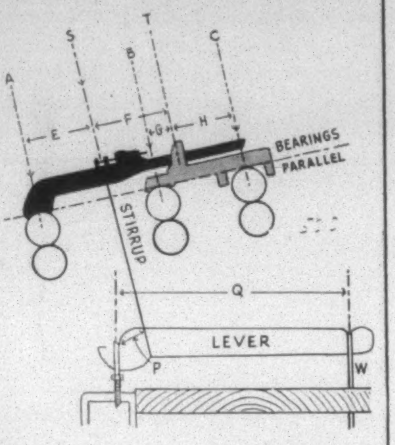
The pin drafter is double headed, combining productive capacity with flexibility of operation. Faller heads are of the full intersecting type. Either can creel or ball creel feed can be supplied. In the former case, the feed stand consists of six 15-inch diameter by 36-inch high cans for each head; the ball feed stand normally accommodates four balls of top for each head, though a six ball-creel is available for lightweight sliver. From the creel, the stock enters sliver guides, and passes through feed stop rollers. These serve not only to draw the stock away from the creel as it feeds through the guides, but also act as a stop motion in case of sliver run-out or break. A splicing or conveyer belt then carries the stock to a condenser, without appreciable drag on the latter. The length of belt provides a useful area for splicing in ends. A condenser is used in place of back draft rollers, entirely eliminating the problem of ratch setting. It tensions the stock slightly prior to entering the pins, and serves to bulk up the stock to uniform density in the pins, avoiding flares and edge drafting. The small and simple condenser structure allows room for a longer faller bed as well, making for improved control.

Each of the faller sections is five inches wide by 7¾ inches long, and operates at 1,030 drops per minute, equivalent to a sliver entering speed of nine yards per minute. Capacity per head is 1,000 grains per yard of entering slivers. Feed saddles are tapered from entry to discharge to compensate for draft. The $\frac{5}{16}$-inch pitch drive screws and cams are designed for smooth, long-life service, while reduc-



NEW WARNER & SWASEY PIN DRAFTER is equipped with either can creel (shown above) or ball creel feeds. Refined design of the mechanism enables the new machine to produce high-integrity sliver in fewer operations. High control over the total cross-section of the fiber diagram results in a better integration of fiber and a notable reduction in fly waste, due to the absence of broken fiber.

How to Check Weights on your Spinning Rolls



A, B and C — Pressures on Front, Middle and Back Rolls as shown above
E, F, G, and H — Distances shown measured in inches.
P — The perpendicular distance from stirrup to contact point at top of lever screw. When measuring, be sure rule is held so angle with stirrup is 90°
Q — The distance from contact point at top of lever screw to weight hook
T — The point of contact between saddles, as well as the pressure on the Back Saddle.
S — The point of contact between stirrup and Front Saddle, as well as the pressure on the Front Saddle.
W — The weight on the lever in pounds.

Formulae for Figuring Weight on Rolls:

For Pressure on Front Saddle: $(W)(Q) = S(P)$ Solve for S
For Pressure on Front Roll: $(S)(F) = A(E+F)$ Solve for A
For Pressure on Back Saddle: $(S)(E) = T(E+F)$ Solve for T
For Pressure on Middle Roll: $(T)(H) = B(G+H)$ Solve for B
For Pressure on Back Roll: $(T)(G) = C(G+H)$ Solve for C

DIXON suggests a careful Check of Weighing on all Rolls

The above weight ratio formulae are designed to help you to a more complete and visual understanding of the many factors affecting good weighting and the proper functions of an ideal saddle assembly. Knowledge of the hows of correct weighting and the application of this knowledge in practice may prevent many a drafting headache

Cut out this diagram and formulae and keep for your future reference or we will send you reprints on request. If you encounter weighting problems which these formulae do not solve, send them to us for solution.

DIXON LUBRICATING SADDLE CO.
Established 1876
BRISTOL, RHODE ISLAND, U. S. A.

Sole Manufacturers of
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LUBRICATING SADDLES

ing pin marking and crimp by eliminating faller creep. The draft roll section involves a three-roll unit, consisting of an inner 7/8-inch diameter fluted nip roll and a forward 2 5/8-inch fluted roll, both in contact with a 2 1/2-inch synthetic-covered pressure roll. Nip length from faller section is adjustable from 13/16-inch minimum to 1 1/2-inch maximum. The draft is entirely dependent on the speed of the draft roll section, and hence is readily controlled by an easily accessible change gear. Change gears are provided with increments of one tooth in a draft range of three to 7.5, or four to ten. The draft change gear is the only major operating adjustment required by the pin drafter, aside from setting the condenser for the bulk of stock being handled.

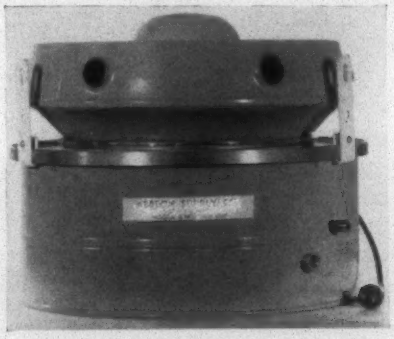
Calendar rolls transfer finished sliver to coiler heads, where a slight tension is maintained up to the point of discharge, to aid in locking-in the folded sliver. The coiler sweep is 3 1/4 inches, and both coiler speed and receiving can turntable rotation are automatically maintained in direct relationship to draft roll speed. The drive for the pin drafter is from a 2 1/2 h. p. motor to the main gear box, whence it branches off to the creel, feed, faller, draft roll and coiler elements. Four pushbutton stations at each corner of the bed provide functions of start, stop, and jog. Automatic safety stops go into action under four conditions. If broken or run-out ends are received from the creel, a stop motion is activated. Should roll laps or breaks occur on the discharge side of the draft rolls, another motion shuts down the machine. A faller lap stop motion prevents faller laps. An electrical yardage counter is also capable of stopping the machine at any set yardage.

Management Advice Firm Opens Greensboro Office

J. D. Woods & Gordon, Inc., management consultant firm, Jan. 5 opened its Southern headquarters office at Greensboro, N. C. E. G. Michaels, II, until recently associated with Fieldcrest Mills, is general manager of the new office, and J. Henderson of Toronto, Can., is field supervisor. The company plans to transfer a number of industrial engineers to Greensboro to form the nucleus of a permanent organization. Services offered immediately are time and motion study, job evaluation, incentive plans for direct operators and supervisory staff, supervisory training, development of cost control methods and the installation of cost systems and training in the techniques of personnel selection, placement and job instruction.

Walton Adds Humidifier To Its Standard Line

Walton Laboratories, Inc., Irvington, N. J., announces the addition of a filter-protected humidifier to its standard line (see photograph). Vaporizing better than a gallon of water per hour, this unit has the added advantage of being protected by a spun glass filter which makes the unit lint and dustproof. Although the unit remains suspended from the ceiling, out of the way, the filter is placed so that it can be easily removed and rapped out or vacuumed while in place. Replacement filters are available at low cost when necessary.



Watson & Desmond, 218 1/2 West Fourth Street, Charlotte 2, N. C., distributes the humidifiers in the Carolinas and Virginia.

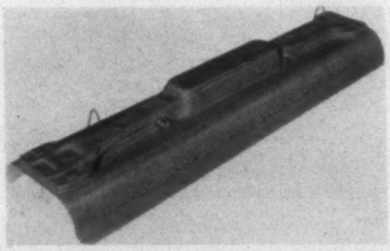
Southern Representatives Appointed By Durant

The Durant Mfg. Co. of Milwaukee, Wis., has appointed Herndon Machinery Co., Charlotte, N. C., to handle the sale of Productimeter counting and measuring machines in textile and general industrial fields in North and South Carolina. Marion E. Herndon, Jr., owner and organizer of the Herndon Machinery Co., is a graduate of North Carolina State College, with a degree in textile manufacturing. He was formerly associated with the Cleveland Cloth Mills at Shelby, N. C.

Durant also announces the appointment of the Comer Co., 308 Ivy Street, N. E., Atlanta 1, Ga., to handle the sale of its products in textile and industrial fields in the state of Georgia. The Comer Co. is the sales and engineering division of the Comer Machinery Co., which has been supplying textile equipment to the trade since 1933, and its founder, Ben T. Comer, Sr., has been connected with the textile industry since 1902. The division is composed of qualified sales engineers whose background and experience make them particularly well fitted for consultation and recommendation on the application of Productimeters for pick, hank, yardage, revolution and stroke counting in textile plants.

Industrial Fixture Line Weatherized By Sylvania

With the introduction of its restyled HF-100 fluorescent fixture, as illustrated, Sylvania Electric Products, Inc., New York City, has announced the complete "weatherizing" of its industrial fixture line by means of a revolutionary finish which makes the fixtures highly resistant to rust, corrosion, pitting and crazing. Because weatherizing materially prolongs the life of fluorescent fixtures subject to deteriorating influences such as the high humidity conditions in textile mills, laboratories and many other locations, it represents a significant advance in fixture development.



Sylvania weatherizing is the result of special processing and Miracoating the plain steel fixture parts as well as baking them by means of exact high temperature controls. In the processing of the tophousing and reflector, an electrolytic action insures complete coverage of the treated parts and prevents rusting or oxidation of the steel, the firm claims. The treatment chemically roughens the metal to provide greater adhesive surfaces for the Miracoat which is a plastic finish compounded of the clearest, most durable thermosetting paint resins and the purest white pigments known.

In addition to its protective qualities, the white miracoat finish on the reflector furnishes a reflection factor of not less than 86 per cent and a resulting light efficiency of 85 per cent. Designed as a two-lamp, 40-watt fixture, the HF-100 is equipped with a pair of knockouts to provide for another lamp,

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SELVAGES

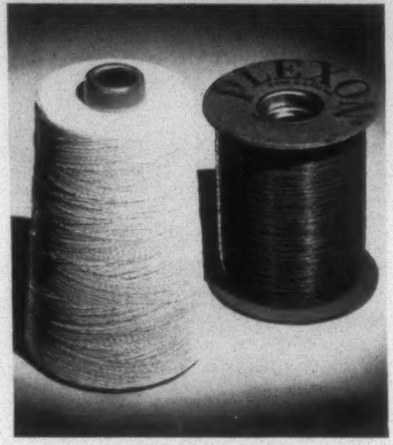
Years Ahead in Heddles!

thus converting to a three-lamp HF-150 fixture, if desired. Streamlined and modern in appearance, the weatherized HF-100 can be installed individually or in continuous row, and is available for immediate delivery.

Sindar Corp. Established By Givaudan-Delawanna

Givaudan-Delawanna, Inc., of New York, announces the formation of Sindar Corp., a separate company that has been formed to take over the activities formerly carried out by the Industrial Products Division of Givaudan-Delawanna, Inc. Sindar Corp. will therefore be devoted to the manufacture, promotion and sale of industrial aromatics, antiseptics, germicides, mildewcides, preservatives, stabilizers, and other products for such industries as textile, rubber, paint, paper, plastics and printing inks. Sindar Corp. is located at 330 West 42nd Street, New York City, and has branch offices in Chicago, Los Angeles, Philadelphia, Cincinnati, Detroit, Seattle and Boston, and is represented in Canada by Stuart Brothers, Ltd., of Montreal and Toronto. It will combine the benefits of the unequalled experience of the Givaudan organization in aromatics and related fields, with the advantages of concentrated and undivided attention in the promotion of its products and the development of new commodities in its line.

Plexon Yarns Are Now Available On Cones



Plexon yarns, as shown, are now available on cones as well as on spools, according to Plexon, Inc., New York City. The new put-up is designed to alleviate time consuming change-over at mills accustomed to working with coned yarns.

Tennant Floor Edger For Textile Plants

A two-motored portable edger with nose only 4¼ inches high, illustrated below, specially designed for sanding hard-to-reach floors under textile machinery, along baseboards, etc., has been developed by G. H. Tennant Co., 2530 North Second Street, Minneapolis 11, Minn. An exclusive feature is use of a conical cushion that accommodates standard seven-inch flat sanding discs. As the tapered cushion rotates, it concentrates pressure on the sandpaper in a short, effective arc with approximately 85 per cent of the disc running free. This action, it is claimed, flexes and cools the sanding disc, helps keep the grits free of clogging dirt or sanding dust and allows faster cutting action. Sandpaper reportedly cuts more smoothly and lasts longer than on conventional edgers, comparative tests indicate.

Almost 100 per cent dust control is provided by a powerful vacuum system which includes a separate fan motor (10,000 R.P.M.) and a sealed-to-floor dust shroud. Flexiblet skirt, resting on floor, encloses sanding disc and vacuum housing. The low-nose design of the edger makes it specially suitable for use in textile mills, under looms, spinning frames and wherever clean, neat sanding or finishing is required. Areas ordinarily inaccessible to mechanical floor cleaning equipment can thus be reached, eliminating dark, unsightly patches and allowing better standards of maintenance, it is claimed. The Tennant edger is built of rugged aluminum alloy, attractively polished, and comes equipped with built-in light, 25 feet of rubber covered extension cord, large smooth-rolling casters, instantly de-

Harness Straps lead an easy life on RunRites

Probably one of the most valued advantages of RunRite Plastic Sheaves is their ability to lengthen the service life of costly harness straps. The surface of RunRites is hard and smooth . . . no abrasiveness whatsoever. Special precision bearings keep them running true. No dusting. Once RunRites are installed they need no further attention.

RUNRITE TRADE MARK *Plastic Sheaves*

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HARRIS MANUFACTURING CO., Atlanta, Ga.

tachable dust pipe and fabric bag. Dual motors are of universal type for 60-cycle AC or DC, and have separate switches. Standard flat sandpaper discs, seven inches in diameter, can be changed in 20 seconds without use of tools. Descriptive literature is available from the manufacturer.

Directory Of Commercial And College Laboratories

A complete listing of commercial and university testing and research laboratories throughout the country, together with indications of the type of commodities tested, has been compiled by the National Bureau of Standards. Tis pamphlet is now available from the Government Printing Office as N. B. S. Miscellaneous Publication M187 entitled *Directory of Commercial and College Laboratories.* As the principal agency of the Federal Government for research and testing in physics, mathematics, chemistry, and engineering, the bureau makes tests and carries out investigations for other government organizations. However, it does not make tests for private individuals if other laboratories can do the work with the required accuracy. Since inquiries regarding such service are often received, this classified list was assembled to inform interested persons of the location of other testing facilities. It is expected that the directory will also be of value to the large number of purchasers who are not equipped to make their own acceptance tests and have therefore hesitated to buy on specifications. Information is given concerning 220 commercial laboratories, with 80 branches or offices, and 189 college laboratories used for research and testing as well as instruction. Listings are arranged both geographically and alphabetically to facilitate the ready location of any laboratory. Miscellaneous Publication M187 may be obtained only from the Superintendent of Documents, Washington 25, D. C., at 30 cents per copy.

Viscosity Controller For Nylon Sizing Solution

Recently announced by Fischer & Porter Co. of Hatboro, Pa., is a new kind of Viscosimeter which is partic-

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FABCO LOOM STRAPPING — Designed for long life, minimum stretch and greater flexibility. Specially constructed of layers of cotton duck impregnated with rubber in thicknesses as required. In finished strapping or roll lengths.

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ularly well adapted to control of the nylon sizing solutions used in dressing yarns. The instrument is reported to be as simple to read and install as a thermometer and to be of the instantaneous reading type. No tedious timing of the flow of samples through apertures is required. These instruments are available for viscosity ranges of approximately 80 to 130 SSU and control of size viscosity is said to be possible to within closer than 1 SSU. Low priced indicators, as well as more elaborate recorders or automatic controllers are thoroughly described in Bulletin 88-D. Address requests for this literature to Fischer & Porter Co., Department 1, Hatboro, Pa.

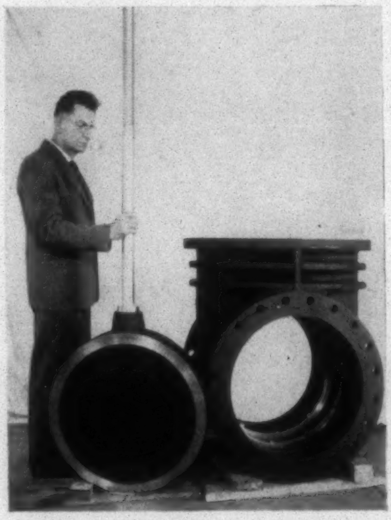
South Bend Lathe Works Offers Book To Industry

The South Bend Lathe Works has just issued the 45th edition of its popular book, *How To Run A Lathe*. A number of changes in text material and illustrations have been made since the previous edition was printed in 1944. This book contains the latest information on the operation and care of metal working lathes. It covers such subjects as the operation of the lathe units, grinding cutter bits, making accurate measurements, plain turning, chuck work, taper turning, boring, drilling, reaming, tapping, cutting screw threads, reference tables, etc.

Written clearly and concisely, it is widely used by machinists, and as a shop text in schools and apprentice training courses. This edition contains 128 pages, 5⅛ inches by eight inches, and over 365 illustrations. Postpaid copies are available with paper covers for 25c (U. S. coin) or with leatherette covers for $1. Write to the South Bend Lathe Works, 376 East Madison Street, South Bend 22, Ind.

Huge Gate Valve Rebuilt By Gaffney, S. C., Plant

Reconditioning of a 24-inch gate valve, largest ever to be rebuilt in the United States outside of a navy yard or a valve manufacturing plant, recently was completed in Gaffney, S. C., by the National Valve & Fittings Service, for Dan River Mills, Inc., Danville, Va., J. H. Jobson, general manager of the Gaffney firm, is shown in the illustration below examining the big valve.



Data on the valve follows: weight of body, 1,780 pounds; weight of gate, 480 pounds; height assembled, ten feet and four inches; requires 51 turns of a 30-inch hand wheel to open fully from the closed position; and the 2¼-inch bronze rod for the stem weighed 82½ pounds, from which 12½ pounds of metal was machined. Shortly after the refinished valve had been returned to Dan River Mills, company officials called Mr. Jobson to Danville for a conference and assigned additional work to his plant.

Supervisors' Policy Manual Outlined In A. M. A. Report

Intended primarily as a handbook for those charged with the preparation of supervisors' policy manuals, Research Report No. 11, *How to Prepare and Maintain A Supervisors' Manual,* based on a survey of company practices, has been published by the American Management Association, 330 West 42nd Street, New York 18, N. Y. The report is paper bound, contains 71 pages, and chief topics discussed are: a supervisors' policy manual, an aid to top management; planning the manual; steps in preparing the manual; and manual distribution and maintenance.

Rovolvator Co. Producing New Power Lift Truck

Now coming off the assembly line at the North Bergen, N. J., plant of Rovolvator Co., a pioneer manufacturer of portable elevators and other material handling equipment, is a new walk-along power lift truck which has been aptly christened the Go-Getter. The Go-Getter is streamlined and self-contained but with adjustments within

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*T. M. Reg.
U. S. Pat. Off.

easy access, and amazingly powerful for its diminutive, handy size—27½ inches between control handle and back of battery box, making it one of the shortest trucks of its type on the market.

The Go-Getter has a modern single package hydraulic lift unit on which all adjustments can be made from the outside, the company claims. To simplify maintenance or repairs, the hydraulic or power unit can be quickly and easily removed from the body. The platform truck comes in 4,000 and 6,000-pound capacities. Heights seven, nine or 11 inches. Lengths 36, 48, 54, 60 and 72 inches and over with 26½-inch width. The platform will raise a full four inches. Six-inch height available under certain conditions. An under-clearance of 3½ inches avoids hanging on ramps or aprons. The Go-Getter operates on a six-cell 13-plate battery which gives normal eight-hour operation. Front wheels are 12 x 3½-inch dual wheels with demountable rubber tires. On the platform trucks the rear wheels have the same diameter as the lowered platform height. All wheels have moulded rubber treads. The truck delivers complete with lockable control and horn at a popular price.

Functions Of Controller Are Outlined In Report

The problems arising from the economic developments of the last few years, and the increasing extent to which governmental control has affected business, have had a marked influence on the functions of the controller in the average business organization. This fact was revealed by a survey of a representative group of more than 50 companies in the United States and Canada. Conducted by the Policyholders Service Bureau of the Metropolitan Life Insurance Co., in co-operation with the Controller's Institute of America, the survey reflected the increasing responsibility and importance of the controller.

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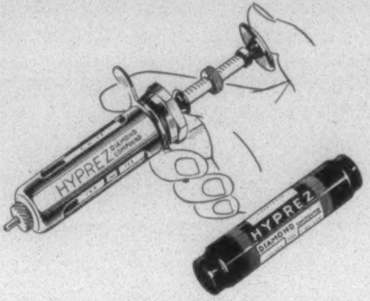
Metropolitan group insured companies with detailed information on the present-day concept and scope of the controller's position, findings of the survey have been published in the form of a report entitled *Functions of the Controller*. Among the subjects covered by the report are: recent changes in the controller's functions; the controller's place in the administrative organization; the controller's relationships with other company executives, government agencies and public accountants; general functions of the controller, and the specific duties he performs. Copies of the report are available to executives who request them on their business stationery. Address: Policyholders Service Bureau, Metropolitan Life Insurance Co., 1 Madison Avenue, New York 10, N. Y.

Westinghouse Offers New Interior Lighting Booklet

To help architects, electrical contractors and lighting engineers achieve both comfortable seeing conditions and modern lighting effects, a booklet describing the new recessed Troffer Luminaires has been prepared by the Westinghouse Electric Corp. lighting division. Pointing out the ease of installing and maintaining proper illumination by use of the versatile troffers, this 12-page booklet includes photographs, sketches, schematic diagrams, illumination design data and suggested layouts for various conditions. Copies of the booklet (B-3959) may be obtained from the Westinghouse Electric Corp., P. O. Box 868, Pittsburgh 30, Pa.

Hyprez Compounds Polish, Refinish Thread Guides

Hyprez Diamond Compounds are now being used in the polishing and refinishing of thread guides, machine parts, bearings, etc., in the textile industry. On stainless steel, steel, sapphire, tungsten-carbide, ceramics and other hard materials, the Hyprez method permits effective and reliable finishing of such parts in production, as well as simple and quick repolishing in maintenance. A higher polish that results in better performance and longer-wearing life is claimed for this method. The abrasive content of Hyprez consists exclusively of clean virgin, accurately graded diamond powders uniformly distributed and permanently suspended in a patented stable compound of identifying integral color.



Sealed in dustproof glass cartridges, the compound is loaded in the Hyprez applicator gun (illustrated above), which is especially designed for economy and ease of operation even in the hands of the inexperienced. It is equipped with a standard nozzle that extrudes exactly metered amounts, or with a reduction needle which dispenses the compound in pin-point quantities for fine work. The equipment and method of application eliminate guesswork, waste and loss of time, the company claims. Hyprez Diamond Compounds are available from Hyprez Division, Engis Equipment Co., 431 South Dearborn Street, Chicago 5, Ill.

New Electronic Instrument Analyzes Cotton Fibers

A new electronic instrument which eliminates guess work in determining length and uniformity of cotton fibers is announced by the Fulton Sylphon Division of Robertshaw-Fulton Controls Co., Knoxville, Tenn.

This new instrument, termed the Fibrograph (see illustration), employs light-sensitive photo tubes for scanning samples of parallel cotton fibers, and simultaneously traces a length-frequency curve. The geometrical properties of

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the resulting curve, in contrast to the fallibility of human eyes and judgment, make it possible to readily and quickly determine various average length intervals, variance and co-efficient of variation.

The operating current of the Fibrograph is 110-120-volt, 60-cycle A. C.; also supplied on order and at extra cost for other operating currents; wattage, 40; dimensions, 12 inches by 14 inches by 21 inches; finish, black crystalline lacquer; Fibrogram card size, three inches by five inches; accessories supplied, four fiber combs, one fibroscale, one bottle ink, 100 Fibrogram cards, one fiber brush, one eight-foot extension cord; shipping weight, 80 pounds. Further information will be furnished free upon request to Dept. FP, Fulton Sylphon Division, Robertshaw-Fulton Controls Co., Knoxville, Tenn.

Hercules Booklet Presents Applications For Clorafin

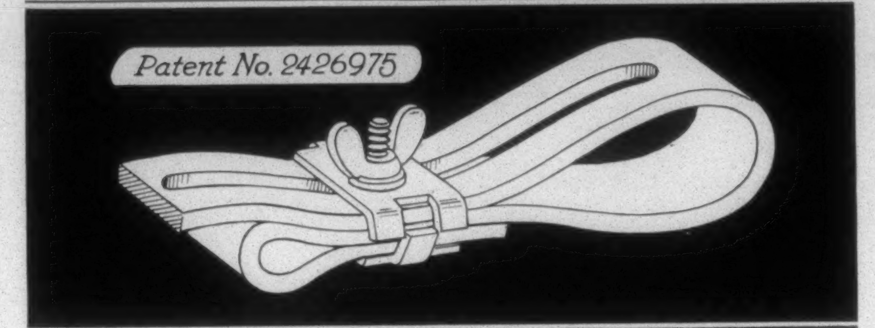
Information on many new applications for Clorafin, Hercules Powder Co.'s chlorinated paraffin, is included in a new booklet which also covers revised information on the use of Clorafin in flame-proof and weather-proof textile coatings. Considerable interest has been evidenced in the use of Clorafin 42 as a low cost plasticizer in pigmented vinyl coatings for cloth and metal and as a plasticizer for vinyl plastics. The new booklet includes the results of tests of vinyl coatings and vinyl plastics containing Clorafin.

Other new applications for Clorafin mentioned in the new booklet include the use of Clorafin 70 as a moisture-proof coating for plywood and the use of Clorafin in combination with Parlon, Hercules chlorinated rubber, in chemical-resistant finishes for metal. Clorafin 70 appears to be an effective barrier against moisture vapor transmission through plywood panels. Also discussed in the book are the general properties of the various types of Clorafins. An appendix to the booklet lists all trade names mentioned in the text and includes the chemical identity of these trade names, together with their owners.

New Shuttle Developed For High-Speed Looms

The Southern Shuttles Division of Steel Heddle Mfg. Co., with main plant at Greenville, S. C., announces

NEW JACK STRAP



and CLAMP COMBINATION

Gives Faster, More Efficient Loom Production at Lower Cost

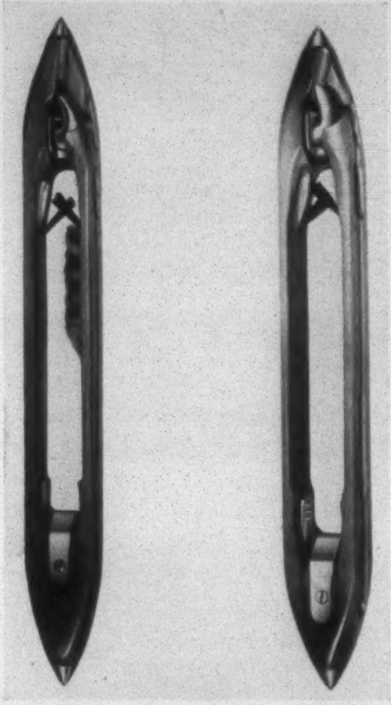
Production efficiency hits a new high with this new, accurate jack strap. The patented combination permits absolute accuracy in adjustments down to 1/64"—and then protects that adjustment against vibration with an iron grip.

Put this efficiency expert to work for you today. You will save time, money, labor. Thoroughly tested & approved by leading mills. Write, wire or phone for further details.

Exclusively by

W. D. DODENHOFF CO., Inc.
GREENVILLE, S. C.
MAIN OFFICE
MAYWOOD, N. J.
EASTERN DIVISION

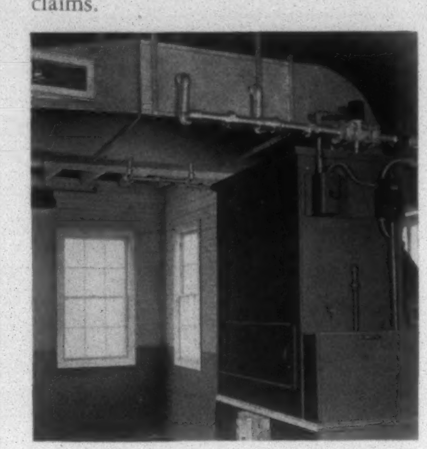
the development of a shuttle for modern high-speed looms which, it is claimed, "will take everything the loom will give." The shuttle has a body of tempered dogwood with tip inserted into the wood by a new method which insures permanency, and a one-piece eye which is said to feed and take faster delivery of yarn.



The side thread guide, made of a special steel, is stamped carefully to size and shape, and scientifically carbonized and heat-treated. In the illustration above are shown a shuttle for the Draper X-L loom (left), and a shuttle for the Draper X-2 (right).

New Unit System Combines Heating With Humidifying

A new unit system that combines heating with humidifying in one machine is being made by Air-Perme-Ator Mfg. Co. In cold weather the air is both heated and humidified inside the machine, which can be placed anywhere, even on a platform, thus conserving floor space, the company claims.



Coils for heating are installed inside the regular Air-Perme-Ator unit, illustrated above, and steam is automatically turned on or off by thermostatic control. Either heat or humidification is given independently, or both will be given at the same time. No heat is lost, as in ordinary wall pipe heating systems. Fuel savings of up to 50 per cent over old methods are obtained, the company states. There is no condensation of moisture on machinery or stock, as with spray humidifying systems, since the Air-Perme-Ator releases no free moisture into the air.

Du Pont Now Offering New PMA Textile Size

The Du Pont Co. announced recently that polymethacrylic acid (PMA) textile size is now available. It is particularly suited for slasher sizing raw nylon continuous filament warps. Promising results were achieved using PMA for slasher sizing and weaving in tests made in several mills and at the Newport, Del., weaving laboratory of Du Pont's nylon division, during recent months. More than 200 nylon warps were slashed and woven in the company's laboratory, and considerable yardage was processed in the various mills where commercial use was initiated with the limited amount of polymethacrylic acid (PMA) then available.

The experimental and commercial trials have proven successful in slashing warps of many constructions and weaves, according to the nylon technical service bulletin on PMA textile size just issued by the company. Excellent results were obtained in satins, twills and lenos, and marked improvements were noted on taffetas. PMA is readily water soluble, easy to apply and is easily removed in scouring, the bulletin states. Its performance has been the most satisfactory of the many candidate sizes evaluated by nylon technical service, the company said.

Since PMA has excellent adhesion to raw nylon, loom shedding, the flaking or powdering of the size, is practically eliminated when PMA is applied to the warp uniformly and in proper amounts. PMA sized warps generally

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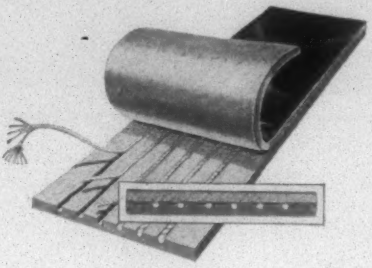
exhibit a satisfactory break at the split rods. With normal pick-up of size and proper drying on the cans, the split should occur well before the warp reaches the first bar. For scouring, conventional hot water, soap, and alkaline scours have been found satisfactory in removing PMA from woven fabrics. Yarn which has been tinted may require special scouring procedure. Commenting upon availability of the product, the ammonia department, which produces PMA, said that though the present rate of output is on a limited commercial basis, capacity should be adequate for current anticipated needs. Packaged as a dry powder, PMA size is available in 50 and 100-pound, net, containers.

Glyco Products Issues New Edition Of Manual

Publication of a new edition of *Chemicals By Glyco,* a 92-page manual listing and describing the many organic chemical compounds manufactured by Glyco Products Co., Inc., has been announced. The chemical firm, which has plants in Brooklyn, N. Y., and Natrium, W. Va., manufactures an extensive line of chemical products for a wide variety of industrial uses. Besides listing and describing the complete line of Glyco chemicals, the new edition gives formulae for basic uses of the chemicals. Copies of the new manual may be obtained by writing to the company's main office at 26 Court Street, Brooklyn 2, N. Y.

New Multo-Cord Belts Offered By Richmond Co.

A new type belt which eliminates practically all of the annoying and costly stretch usually found in even the best standard leather belting, called the Multo-Cord belt, is being manufactured by the Richmond Belting Co., Richmond, Va.



Stretch is almost completely eliminated, the company claims, by virtue of pre-stretched and specially treated cotton cables which are embedded in the lower ply of a two-ply belt, as illustrated above. These run the length of the belt and are laid approximately one-quarter of an inch apart. Each cable consists of 40 strands of long staple Egyptian cotton which are woven into five cords of eight strands each. The manufacturer claims longer life for this belt, as well as almost complete absence of stretch. Endless check straps are also made of this same construction. Oliver D. Landis, Inc., 718 Queens Road, Charlotte 7, N. C., has been appointed Southern representative for Multo-Cord belts.

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- Precision-gauged for thickness, width, length
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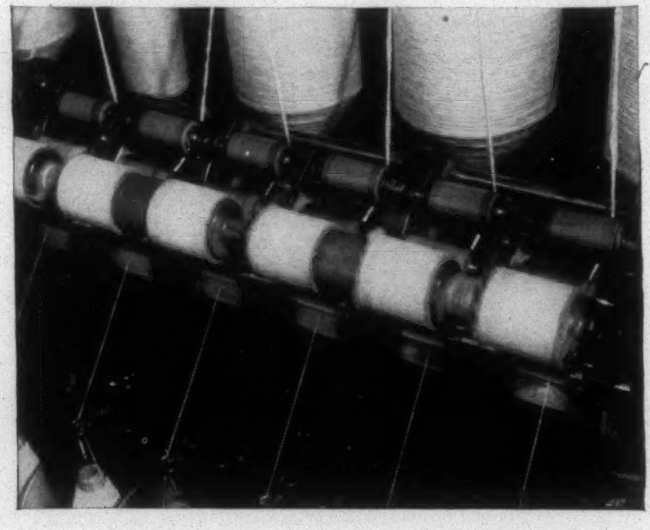

That spinning room overseers welcomed a *better-fitting* apron is shown by the ever increasing sale of KENTEX *precision-built* aprons, since their introduction into a highly competitive field nine years ago.

Kentex Aprons made to any specifications, on short notice. Write for free samples and prices.

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APRON

TEXTILE APRON COMPANY
EAST POINT, GEORGIA
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Saco-Lowell's Newest Vice-President

Walter W. Gayle, pictured at left, long has been a leader among the textile machinery agents in the South. The recent announcement that he has been promoted by Saco-Lowell Shops to the position of vice-president and director of sales and service in Southern states was received with much pleasure by his many friends among Southern textile manufacturers.

Mr. Gayle was born at Montgomery, Ala., in 1890. He was graduated with an M. E. degree at the University of Alabama and took a course in cotton classing at Auburn. Later he attended the Philadelphia Textile School and graduated with a B. S. degree. He then worked in mills at Tallassee, Ala., Shawmut, Ala., and the Stark Mill at Manchester, N. H.

On Oct. 2, 1917, he entered the employment of the Saco-Lowell Shops as manager of its office at Greenville, S. C., and remained there until 1924 when he transferred to Atlanta, Ga., as manager of that office. Upon the death in 1926 of Roger W. Davis, Southern agent for the Saco-Lowell Shops, Mr. Gayle was moved to Charlotte and promoted to his position and has held it since that time.

He has two children, a son and a daughter. His son recently graduated at the School of Textiles at North Carolina State College.

Report Lists Cotton Variety Test Results

The Department of Agriculture, Production and Marketing Administration, Cotton Branch, recently issued to the industry its Supplement No. 1 to the report issued in November, 1947, giving fiber and spinning test results for some pure varieties grown by selected cotton improvement groups. Results given in the supplemental report represent those obtained in tests of mid-season or second picking cotton from the same areas as shown in the report issued in November, 1947. The conditions with respect to selection of areas and purity of varieties are also the same as those described in the earlier report. An effort was made, the department reports, to space the collection of these second lots so that they would be representative of the grade and staple length produced in each instance, in the specified areas during the mid-season. The grades or staple lengths of cotton produced during the second period are occasionally the same as those for the early-picked cotton, as a result of the unusually favorable weather conditions which prevailed in some areas. Other fiber properties, however, are different because of the time of maturing of the fiber and other factors.

Hearing On Long Staple Quota Set Feb. 17

Some definite action concerning the current mill shortages of long-staple cotton may ensue Feb. 17 when the U. S. Tariff Commission will hold a supplemental investigation and hearing, open to all interested persons, to determine whether the circumstances requiring the import quotas on cotton having a staple of $1\frac{1}{8}$ inches or more in length continue to exist, or whether changed circumstances require the modification of the quotas for the present quota year or for future quota years. The public meeting is to be held in the Hearing Room of the commission at Eighth and E Streets, N.W., Washington, D. C., beginning at 10 a. m., Feb. 17. Industry leaders for some months have been urging the government to modify the present quota on long-staple imports, which, they claimed, was working to the disadvantage of American mills and causing hardship.

Quotas on imports of cotton having a staple of $1\frac{1}{8}$ inches or more in length were originally made effective on Sept. 20, 1939, by presidential proclamation. The President later suspended the application of the proclaimed quotas to cotton having a staple of $1\frac{11}{16}$ inches or more in length, so that since Dec. 19, 1940, the quotas on long-staple cotton have applied only to cotton having a staple of $1\frac{1}{8}$ inches or more but less than $1\frac{11}{16}$ inches in length. On June 9, 1947, the President proclaimed a supplemental import quota for the quota year ending Sept. 19, 1947, permitting the entry, during that quota year only, of an additional quantity of cotton having a staple of $1\frac{3}{8}$ inches or more.

Exports of Egyptian cotton from Sept. 3, 1947—beginning of the cotton season—to Jan. 1, totaled 348,347 bales or 2,543,641 kantars compared to 274,087 bales and 1,996,902 kantars for the corresponding period of last year. The kantar is an Egyptian weight measure equivalent to 100 pounds. Though foreign demand for Egyptian long staple cotton is high, market prices at the Minet el Bassal exchange in Alexandria, Egypt, have dropped lately, owing to government-owned stock selling. Biggest demand is for the Karnak, long staple, variety.

Wool Serge Procurement Being Made

A total of 4,500,000 yards of serge cloth is being purchased for U. S. Army use by the New York Quartermaster Purchasing Office, 111 East 16th Street, New York, N. Y., according to an announcement by Col. L. O. Grice, commanding officer. The procurement will be made, said Colonel Grice, on an advertised bid basis. Formal invitations were forwarded Jan. 13.

Invitations called for: cloth, wool, serge, 18-ounce, OD-33, 56-inch, 4,500,000 linear yards; and/or cloth, wool, serge, 18-ounce, OD-33, 56-inch, 4,500,000 linear yards (with the government to have the right to change over to Blue-84 at any time during the life of the contract, except for dyed stock and material in process) and/or cloth, wool, serge, 18-ounce, Blue-84, 56-inch, 4,500,000 linear yards. Bids will be opened at 1 p. m., EST, Feb. 12, stated Colonel Grice. Deliveries will extend into January, 1949.

Three hundred and forty miles of bleached cotton sheets—enough to stretch end to end from Washington, D. C., to Cleveland, Ohio—will be purchased by the Veterans Administration for its hospitals and homes throughout the country, according to A. J. Harrison, chief of V. A.'s procurement division. The sheets, 200,000 in number, are to be 72 inches wide and at least 108 inches long. If sheets 72 inches in width are not available, V. A. will consider those 63 inches wide. Requirements also call for a one-inch hem at one end and a three-inch hem at the other. The sheets were to be purchased through sealed competitive bids. Bidding deadline was Jan. 13.

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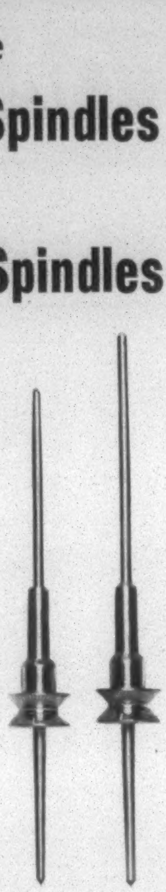

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Survey Shows Feminine Preference For Cotton

Federal researchers, after questioning a selected sample of 1,782 women said to represent all 45,100,000 American homemakers between the ages of 18 and 65, reveals that a majority of the women favor cotton over rayon in respect to longer wearing qualities, ease of laundering, and in being less likely to pull and fray at the seams. The Agriculture Department's Bureau of Agricultural Economics conducted the survey primarily to learn consumer preferences for selected textile products. It was specifically addressed to the problem of the competitive position of cotton and other fibers in specific end-use markets. In comparing homemakers' opinions on cotton versus rayon in women's ready-made clothing, the government researchers said: "Women favor cotton also in saying that cotton looks nicer than rayon after washing, but a considerable number think there is no difference between the two fibers in this respect; as to feeling good next to the skin, apparently more than twice as many women prefer rayon as cotton. In regard to coolness for summer wear and tendency to wrinkle, there is little difference in the expressed opinons about cotton and rayon." The following table records results of the poll on some of the questions mentioned above:

COMPARISON OF OPINIONS ON COTTON AND RAYON FOR CERTAIN SELECTED QUALITIES IN WOMEN'S READY-MADE CLOTHING IN GENERAL

Quantities Mentioned Desirable Qualities	Cotton Per Cent	Rayon Per Cent	No Difference Per Cent	No Opinion Per Cent
Wears longer	73	7	11	9
Easier to wash and iron	57	21	13	9
Looks nicer after washing	45	18	28	9
Cooler for summer wear	44	35	13	8
Feels better next to spin	24	53	13	10
Undesirable Qualities				
More likely to wrinkle	40	35	16	9
More likely to pull or fray at seams	2	89	2	7

Jap Cotton Exports For November Listed

Japanese cotton fabric exports during November, 1947, totaled 42,096,129 linear yards of new production and 1,824,771 linear yards from the Japanese textile stock-pile, according to a recent report of the economic and scientific section of S. C. A. P. The U. S. Commercial Co., which handles sales of Japanese cotton goods under a contract with the Department of the Army, has contracted to deliver to 31 countries a total of 522,879.388 linear yards of cotton fabrics from new production, of which 321,032,559 linear yards had been shipped through November. November exports brought the total of stock-pile fabric shipments to about 57,233,845 linear yards. Combined value of shipments of both new production and stock-pile fabrics since the beginning of the U. S. C. C. sales program had reached about $88,359,683 through November. Including the sales of 26,682,000 pounds of cotton yarn and 500,000 dozen singlets, as well as the fabrics, value of all shipments in the U. S. C. C. cotton textile sales program through November is approximately $109,929,593. Largest quantity of new production fabrics shipped during November to a single area was 23,544,237 linear yards exported to the Netherlands East Indies.

W. A. A. Disposes Of Surplus Textile Items

War Assets Administration announced last month that it is virtually out of business in the disposal of surplus cotton duck and tent twill. An original inventory of approximately 100 million yards of the fabric was reduced during 1946 to about 14 million yards, consisting principally of the less desirable widths, weights and finishes. The 14 million yards was offered during 1947 in a national sales program (A-19-1021). Since subsequent orders have exhausted this supply except for isolated residual small lots, the national program has been cancelled in its entirety. Remaining small lots will be disposed of by the individual regional offices, W. A. A. said, and there will be no more national offerings of the goods. The New York, St. Louis and Los Angeles regional offices, which were the sole sales outlets under the National Program A-19-1021, will no longer operate in this capacity and future sales activity will be handled by the particular region in which materials are located.

Slight Drop In Goods Dyed And Finished

The National Association of Finishers of Textile Fabrics reports a decline of one per cent in the amount of goods dyed and finished during the first 47 weeks of 1947. Black and white were the only categories showing a gain over the 1946 period, registering increases in yardage of 44 and ten per cent, respectively. Colored goods processed showed a 12 per cent decline while prints dropped five per cent. A compilation of new concerns in the dyeing, printing and finishing industry, through the first week of December, noted 25 such establishments with 16 of them being located in New Jersey.

Chemical Output In 1948 May Set New High

Given reasonable world stability, chemical production in the United States during 1948 may well surpass the record high of last year according to Charles S. Munson, president of the Manufacturing Chemists Association, in a report to the American Chemical Society. Chemicals for textile processing were named among many new products cited as important 1947 developments by Mr. Munson. He pointed out that although no official figures for 1947 are available as yet, the Krug report on national resources and foreign aid estimated production of chemicals and related products for the year at $7,514,500,000, as compared with $7,440,100,000 for 1946.

In his report Mr. Munson discussed the possible effect of the Marshall Plan on the chemical industry, remarking that government requirements would be considerably lighter in this field than in some other industries, since many of the chemical products needed by European countries, such as alkalies, are also in high demand here and no surplus will be available for export. Tariff reductions effective Jan. 1 under the Geneva trade pact will effect the chemical industry through the direct importation of chemicals and finished products which require chemicals in manufacture, he reported. "The immediate effects of the new reductions may not be great," he continued, "but as European producers increasingly enter the export markets, exports to the United States may ultimately become an important factor in our domestic markets."

A new microscopy technique, microscopy in color without the use of light filters or dyes, has been developed by Germain C. Crossman, Bausch & Lomb Optical Co. scientist, and the new technique is expected to increase use of the microscope in testing textiles for fiber identification.

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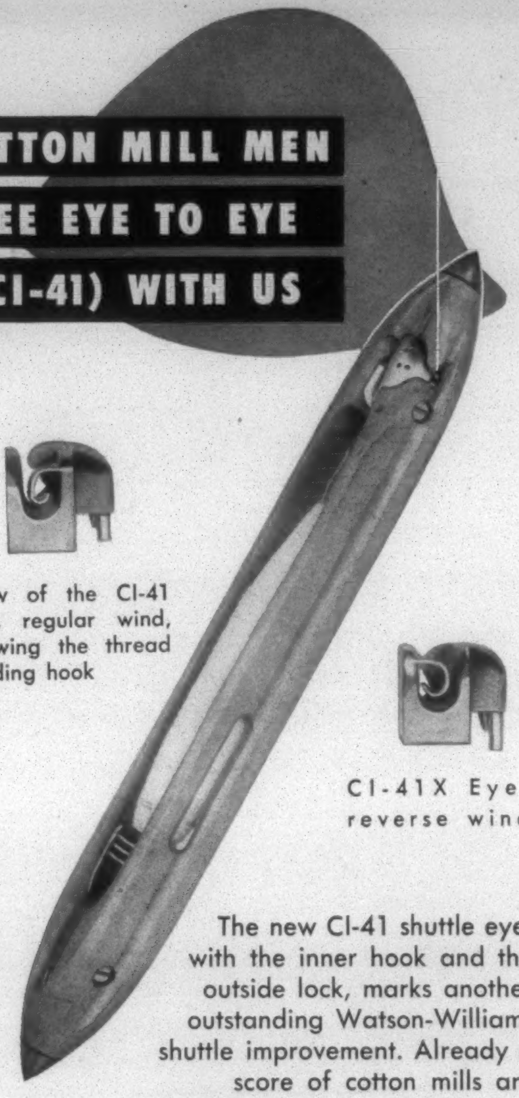

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Pyroxylin Coated Fabric Shipments Drop

Pyroxylin spread in November totaled 4.6 million pounds, according to the Bureau of the Census, Department of Commerce. This total was three per cent less than the amount spread in October, 1947, and was 37 per cent below November, 1946.

November shipments of 5.2 million linear yards of fabric materials were seven per cent below shipments in October, and were 44 per cent below November, 1946. Shipments of 2.3 million yards of pyroxylin coated light cotton fabrics were eight per cent above October. Shipments of 1.6 million yards of pyroxylin coated heavy cotton fabrics were 23 per cent less than October shipments of 2.1 million yards. Shipments of custom coating remained approximately the same as in October.

The 7.1 million yards of unfilled orders for fabric material remained approximately the same as orders on hand at the end of October, but was 42 per cent less than the unfilled orders at the end of November, 1946. Orders on hand of 2.9 million yards for light cotton fabrics were 19 per cent less than October unfilled orders of 3.6 million yards.

This decrease was offset by an increase of 137 per cent in the 1.2 million yards of unfilled orders for custom coating over the 510 thousand yards in October.

Shrinkage Control Ups Use Of Fast Dyes

Successful demonstrations by fabric manufacturers and skillful finishers alike, showing that rayons can be made fully washable, are hastening developments in all phases of fabric finishing, according to Leonard Shapiro, textile research director of Alrose Chemical Co. of Providence, R. I. This success in perfecting dyes fast to light and to washing has stimulated development of improved finishing methods by accentuating inadequacies, especially in the field of dimensional stability, he adds.

"Two of the most important attributes of 'fully washable' textile fabrics are still color fastness and dimensional stabilization," he says, "and the two must go hand in hand. Thus, as soon as one is improved, there is an immediate demand for corresponding improvement in the other." He cites particularly the strides made in the past year in improving rayon shrinkage control methods through use of two new techniques based on caustic soda and aldehyde treatments (Definized and Definized G processes). These techniques, Mr. Shapiro feels, will do much to stimulate consumer and manufacturer demand for permanent dyes and finishes.

Use of napthol, sulfur and vat dyestuffs should continue to increase though direct dyes and water soluble finishes are still in common use because of the widespread acceptance of the idea that rayons should be dry cleaned, the director continued. He believes, however, that this feeling will be gradually dissipated. Mr. Shapiro reminds that other finishes imparting special effects will also feel the stimulus of this cycle of progress, though less attention has been paid them in the past because their durability was not a major factor in determining upon the wearing qualities of a garment or piece of upholstery.

A public spinning school was founded at Jamestown, Va., in the 17th Century—an early forerunner of modern textile schools to which the cotton mills industry contributes millions of dollars for research and education.

Describe Methods For Standardizing Pastes

Procedures used for standardizing vat dye Suprafix pastes and powders "fine" at the I. G. Farbenindustrie Hoechst plant in Germany are described in a report now on sale by the Office of Technical Services, Department of Commerce. The Suprafix pastes were developed as a line of vat dyestuffs for printing. The report was prepared by O. T. S. investigators J. G. Kern, B. M. Helfaer and I. T. Thornton. Two related reports by the same authors are also available from O. T. S.

The value of the pastes and powders results from special procedures used in conditioning the crude color, the report states. Crude color filter press cake or vacuum filter cake is used directly in the paste standardization process providing the physical properties of the material are satisfactory. If the crude product is too coarse, it is put through an acid pasting process before delivery to the standardization department. The acid pasting process involves the solution of one part of crude dry vat dyestuff in 60 parts of concentrated sulfuric acid followed by drowning in water or water and ice. If the moisture of crude press cake which is to be standardized as color paste is too high, it is evaporated to the desired strength in a concentrating tank in the standardization plant. Crude color paste, pre-concentrated if necessary, is given an initial mixing to insure uniformity of the batch and is then tested to determine what subsequent processing is required. Coarse or lumpy patches are wet ground. The uniform slurry of crude color is then standardized by thorough mixing with necessary dispersing agents and other additive chemicals. When a test shows that it conforms to type specifications it is fine screened for delivery as type paste, or else spray dried at low temperature in preparation for grinding, mixing, and delivery as powders "fine." Details of the plant installation at Hoechst, the standardization of Suprafix pastes, dry grinding and mixing of vat dye powders "fine," and specifications and methods for testing the pastes and powders are described in the report. Flow charts are included. The appendix contains a description of the equipment used for the standardization process and gives the chemical composition of 23 Suprafix pastes and 14 standardized vat dye powders "fine." The appendix also describes in detail the standard methods of testing the pastes and powders. Mimeographed copies of the 31-page (PB-78276; *Methods of Standardization of Vat Dye Suprafix Pastes and Powders "Fine," Hoechst)* sell for $1.

In a second report the authors describe the product formulas and standardization methods for vat dye powders "fine" and Celanese dyestuffs at the I. G. Farben Ludwigshafen plant. The methods used at Ludwigshafen are different from and alternative to those used at Hoechst, the report states. At Ludwigshafen, crude color press cake is used directly in the standardization process for powders fine and Celanese dyestuffs. In processing anthraquinone derivatives, the crude product is acid-pasted in the conventional manner (if it does not have satisfactory physical properties) before it is delivered to the standardization department. Two alternative standardization procedures are used. The first is applied to products that are difficult to disperse and involve no fire hazard. With this type, the dye press cake is mixed with dispersing agents and drum dried to a moisture content of ten per cent. The product from the drum dryer is charged to a doughmixer in which it is thoroughly kneaded with water to give a stiff paste containing

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25 per cent water. This paste is run over a five-roll machine which delivers a thin sheet of color that is run directly to a traveling screen dryer for complete removal of water. The dry flake so obtained is ground and mixed with added reduction materials sufficient to deliver type strength dyestuff.

The second procedure is applied to products that cannot be ground with safety in a dry state because of the fire hazard, and also to products which disperse readily and do not require the elaborate processing of the first method. The press cake is charged into a mixing tank in which it is mixed with dispersing agents and then circulated for one to two hours through a coarse screen and a wet grinding mill until a test shows that satisfactory dispersion characteristics have been obtained. The slurry is then spray-dried, resulting in a fine powder which is tested for strength and put in a mixer. The required amount of reduction material ground with a small amount of dyestuff is added to the mix. Type strength material thus obtained is delivered from the mixer to sales containers. The report describes the Ludwigshafen plant, methods of testing the powders and dyestuffs, and specifications used. The appendix tabulates the specifications according to type and dyestuff content. It also includes flow sheets for the standardization of the powders and dyes. Mimeographed copies of the 45-page report (PB-78269, *Methods of Standardization of Vat Dye Powders "Fine" and Celanese Dyes, Ludwigshafen)* sell for $1.25.

A third report (PB-77678, *Screening Device for Slurries of Organic Chemicals)* describes the operating characteristics and design detail of a novel screening device used at the I. G. Farben Leverkusen plant to screen grit and coarse particles from slurries of organic chemicals. Mimeographed copies of this eight-page report sell for 50 cents. Orders for reports should be addressed to the Office of Technical Services, Department of Commerce, Washington 25, D. C., and should be accompanied by check or money order, payable to the Treasurer of the United States.

Chemistry Bureau Reports New Discoveries

Recent results of chemical investigations in the four regional research laboratories and other units of the Bureau of Agricultural and Industrial Chemistry of the U. S. Department of Agriculture, are described by Dr. Louis B. Howard, chief of the Bureau, in his 1947 annual report, released Jan. 13. New discoveries for the year and new scientific and industrial developments based on previous work are briefly described under 64 informative headings. Additional information is given in the year's 289 publications and 27 public service patents which are listed in a mimeographed circular.

Progress was made in making cotton fabrics resistant to penetration by water, and to damage by micro-organisms and sunlight, through chemical processing. A differential dyeing test for detecting immature cotton fibers in admixture with mature fibers was developed and used for select-

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ing cottons of desired maturity. Methods were developed for obtaining improved peanut meal and peanut protein suitable for the manufacture of synthetic fibers and for use as an adhesive in paper coatings and cold water paint. A continuous process was developed for making casein bristles and improvements were made in casein textile fibers, the report reveals.

Monograph On Flameproofing Due Soon

Of particular interest in the textile and related industries is the recent announcement that the National Research Council of the National Academy of Sciences plans at an early date to publish a monograph on flameproofing. This problem has been the target of increasing attention from various groups within the industry during the past several years. The National Research Council plans for 1948 to broaden the scope of its research programs dealing with improvement of textiles, primarily cotton and wool, it is reported. "In this connection, study of the pre-shrinkage of woolen fabrics has been extended and the study of improvements in design and construction of textiles for clothing and tentage has been continued," the council states.

Building Demonstrates Fiberglas Applications

Marking the start of the tenth year of its existence as a company, Owens-Corning Fiberglas Corp. opened for business Jan. 6 the new New York City Fiberglas Building, located at 16 East 56th Street. The building is an unusual structure, for in addition to housing the company's New York staff, it symbolizes the growth of a depression-born industry, and serves as a permanent demonstration of the wide range and numerous applications of glass in fiber form. It betokens the extensive and continuing research and development programs that have fostered the creative usefulness of glass fibers as basic materials.

Conference room on the fifth floor of the New York Fiberglas Building. The ceiling is Fiberglas board (for sound absorption) faced with resin-impregnated Fiberglas mat, swirl pattern. The curtains are woven of Fiberglas, cotton and silver yarns. The chairs around the table and the sofa are covered with a fabric woven of plastic-film-covered Fiberglas yarns, mohair yarns, and novelty yarns. The chair beside the wall on the right is covered with a fabric woven of Fiberglas and wool yarns. The folding doors, which can be closed to make two rooms, are a resin-coated fabric woven of Fiberglas yarns.

More than a score of Fiberglas materials, ranging from air filters, thermal insulation batts, acoustical blankets and acoustical tiles, to glass yarns fabricated into curtains, wall coverings and upholstery fabrics, are used in the building, its equipment and its interior decoration. The architects,

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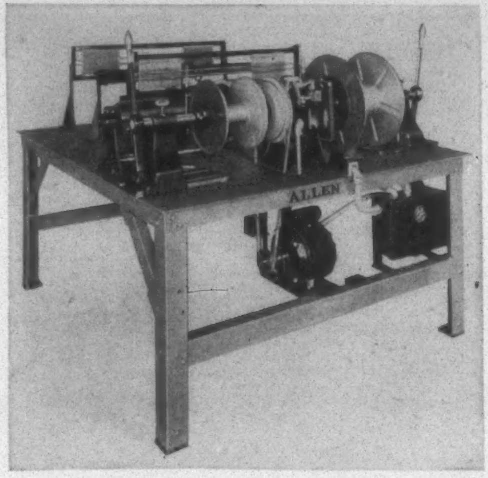

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Skidmore, Owings and Merrill, were directed to use Fiberglas materials wherever practical, regardless of whether they had ever before been used for similar purposes in an office building, or whether they had ever before been used in any similar application. Several of the acoustical wall and ceiling treatments, for instance, are of a type originally designed for use in industrial structures. They are installed in the Fiberglas Building primarily to show how Fiberglas acoustical materials can be employed in industrial plants to help provide good working conditions. Taken as a whole, the building presents a picture of many potential uses of Fiberglas materials, as well as established uses.

To deaden office noises that fray nerves and cause unnecessary fatigue, a number of acoustical treatments are employed, each one utilizing a Fiberglas material for sound absorption. All ceilings are of the suspended type. The majority are of Fiberglas acoustical tile or Fiberglas acoustical board. A treatment employed in individual offices consists of Fiberglas sound-absorbing blankets laid on Fiberglas cord stretched behind Fiberglas fabric. Still another ceiling acoustical treatment is Fiberglas sound-absorbing batts faced with thin, porous Fiberglas mat, installed behind perforated metal.

Wall acoustical treatments also demonstrate the versatility of Fiberglas sound-absorbing materials. Fiberglas blankets are installed between studs of plaster-and-metal-lath walls of washrooms, conference rooms and individual offices. Decorative-acoustical wall treatments are provided by natural color Fiberglas board, by Fiberglas board faced with fabric woven of Fiberglas yarns, and by decorative fabrics, woven of Fiberglas and other yarns, stretched over wood panels, with a Fiberglas acoustical blanket between the fabric and the panel. On large wall areas, Fiberglas board or batts are installed between furring strips, then faced with porous Fiberglas mat. Over this, perforated Fiberglas-plastic sheets, perforated aluminum sheets, or metal grille are placed as finishes. Other wall and ceiling treatments include Fiberglas board faced with a decorative swirl mat of Fiberglas yarns.

The curtain, wall and upholstery fabrics were especially designed for use in the Fiberglas Building by Marianne Strengell, widely known fabric designer and stylist. Using a variety of Fiberglas yarns, and various combinations of Fiberglas and other yarns, she has demonstrated the unusual color, pattern and weave effects obtainable by skillful use of today's textiles. Lemon yellow window curtains in a number of individual offices are woven of Fiberglas and

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cotton yarns. White Fiberglas yarns, and dyed chenille and ratine yarns, are used for yellow-and-white and blue-and-white curtains in other offices. White curtains with a glint of silver, in a conference room on the third floor, are a combination of Fiberglas, cotton, asbestos and silver yarns. Curtains in the conference room on the fifth floor—white and gray with a glint of silver—are woven of Fiberglas, cotton and silver yarns. Fabrics used to cover wall areas are woven of similar combinations. Upholstery fabrics provide the first demonstration of the use of the newly-developed plastic-covered Fiberglas yarns for this purpose. Colors are blue, brown, dark silver, yellow, green and gray. The fabrics are woven of various combinations of the plastic-covered Fiberglas yarns, and mohair, wool and cotton yarns.

The entire second floor of the building is given over to a display area arranged to make clear what Fiberglas materials are, why they are used, what they are used for, and how they have been developed into what they are today. The area is divided into sections, each designed to cover one of these points. Typical displays show the four basic forms of Fiberglas (wool, aeration products, yarns, mats); fabricated products and their principal industrial fields of use; and numerous consumer products, most of which have been developed since the war. One large section covers processes used in the manufacture and fabrication of Fiberglas materials, and milestones in the history of the company. Graphs and figures are included to picture what has been accomplished and to present a forecast of the future.

A large part of the first floor is also given over to a display area where decorative fabrics woven of Fiberglas yarns, and of Fiberglas and other yarns, are shown. The remainder of the floor is occupied by members of the Fiberglas Corp.'s textile division. The building's third and fourth floors house the New York sales staff, including clerical employees. The fifth floor is divided between an office for use by executives of the company temporarily in New York, a bedroom and shower for emergency use, and a large conference room which can be subdivided into two rooms by folding doors of a gray, coated Fiberglas fabric.

Machine Makers View 1948 With Optimism

Textile machine manufacturers of Rhode Island are looking forward to one of their best years in 1948. Basing their expectations on orders already on hand and on other contracts they feel are coming their way, they expect to be very busy in the months ahead. It is generally believed that most of the bottlenecks of the past two years will not appear in the coming 12 months. They see a better flow of raw materials and they are anticipating solutions of the dollar shortage which is currently holding up orders for textile equipment from foreign countries. It is reported that although there has been a good volume of business in the previous year, the pent-up, world-wide demand for textile machinery has not been appeased and that some two to three years of capacity production are ahead.

The first cotton mill in North Carolina was built near Lincolnton, N. C., in 1813—the beginning of the development of the cotton mills industry in a state that now has more active spindles than any other.

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Industry Needs Larger Depreciation Reserve

The cotton textile industry needs to spend a half billion dollars more than it has been able to accumulate in its reserves to replace over-age machinery, buildings and equipment, a survey just completed by the Textile Information Service discloses. Sorely needed replacements call for an expenditure of about one billion dollars but the reserves which the industry set aside during the useful life of the equipment were based upon original costs and present price levels are about twice those at the time of acquisition. Since these reserves were based upon the value at the time of purchase, in accordance with income tax regulations, there is a resulting deficit of approximately 500 million dollars that must be obtained from other sources.

The survey says that notwithstanding good earnings for the past two years substantial profits will be needed for at least five more years if borrowings are to be avoided. This period could be cut, however, if tax laws were changed to allow for the setting up of reserves on the basis of replacement costs. The position of the industry is compared to that of many private individuals who, although they are earning more than ever before, are no better off because of high costs.

While Treasury Department figures are not available since 1942, estimates indicate that in the cotton textile industry depreciable assets such as machinery and equipment, which wear out with use, originally cost slightly over a billion dollars. But on today's market they would cost two billion to replace. Just how serious this might be, the survey points out, can be seen from the fact that the average life of textile machinery, equipment and building is usually figured as 27 years, and for the entire 27 years previous to the end of the war profits of the industry were only a billion dollars.

Partially because of the inability of the mills to replace equipment during the depression years, but more particularly because of their inability to get new machinery during the war years and the terrific strain of continuous operation, it is estimated that half of all equipment needs replacing today. Although it is virtually impossible to establish an average age for machinery on an industry-wide basis, the manufacture dates on some of the equipment provide added proof of the need for their replacement. Equipment of 1900 vintage, and even before, is not uncommon. The survey says, however, that the mills cannot be criticized for not having replaced some of this old machinery, pointing out that for the 14 years, 1926 through 1939, a majority of

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the mills operated in the red in eight of the years and in none of the "black" years were profits large. During the war years, very little machinery was to be had.

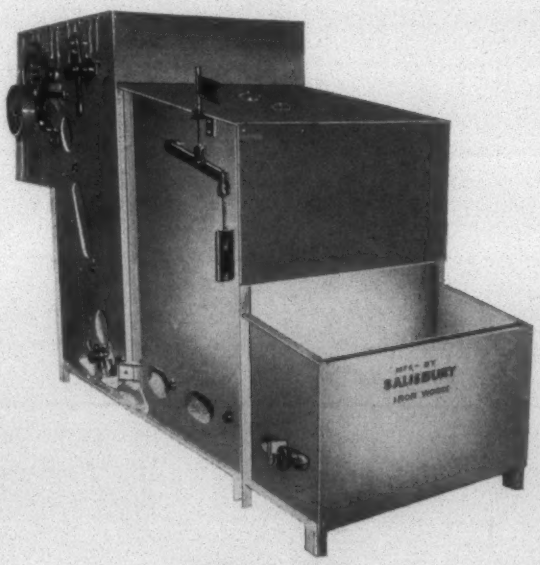
Pointing up the need for continued substantial earnings the survey says expenditures this year are expected to exceed 150 million dollars and estimates for the next five years run as high as 200 million annually. About half of the billion dollars due to be spent during the next five years will be covered by reserve funds which prudent manufacturers have set aside to replace worn out equipment. However, under present tax laws this reserve can only be accumulated on the basis of actual cost and since replacement prices have doubled the funds are completely inadequate. Additional funds can only be laid aside after the payment of federal income taxes which last year averaged 40 per cent. The survey points out that the millions of dollars of earned income being poured back into the businesses are an absolute must if the industry is not content to resign itself to a "boom and bust" theory. New, expensive equipment must be purchased, research continued and production and merchandising methods streamlined if the industry is to keep pace.

Bulletin Studies Cotton Textile Wage Pattern

Highest paid occupations in the cotton textile industry's wage scale are second hands, loom fixers, electricians and machinists, at levels more than 50 per cent above those in the lowest-skilled, or base, pay groups. Men weavers on jacquard, box and dobby looms, and maintenance mechanics are grouped next, 40 to 45 per cent above the base group; this information was revealed in a bulletin released by the United States Department of Labor, Bureau of Labor Statistics, and is ninth in the Occupational Wage Relationship series compiled by the department for the information of industry. Data contained in the bulletin is based on a study of the April-May, 1946, payroll period.

At a lower level within the skilled group were other maintenance occupations, women weavers, and men weavers on plain looms. Of the occupations studied, none pertaining to the initial preparation of yarn and dyeing and finishing was, on the average, at a level more than 30 per cent above the lowest-skilled, even when paid on an incentive basis. The rates of pay for such groups as battery hands, roving men, filling hands, general hand truckers and watchmen, which account for a large number of workers, approximated or were only slightly above the base rate. Incentive workers appeared at substantially higher levels in the average wage scale than time workers in the same occupations. The bulletin also revealed that second hands, loom fixers, carpenters and slasher tenders occupied considerably higher positions in union than in non-union wage scales. There was a slightly greater wage spread among the low-skilled jobs in union than in non-union mills. With these exceptions and with other minor variations, there was a high degree of similarity in the two wage patterns.

Early in the nineteenth century a machine was widely used in the South which by the operation of a single crank ginned, carded and spun simultaneously six threads of cotton.



MODEL S BF-1
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Model S BF-1 Salisbury Enclosed Cotton Blendng Feeder is used for the processing of cotton, wool, and synthetics.

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The Salisbury Enclosed Blending Feeder has a heavy fabricated steel frame which makes it a rugged, durable, and trouble free unit. All gears and chains are covered with guards for safety.

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The machine may be used in a blending line or in combination with a picker.

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Model S BF-1 as shown is equipped with a lower or front apron which extends outside the storage chamber of the machine and has a small bin into which the raw material is placed by the operator. It is then carried into the storage chamber on the conveyor apron. This model also has a combing attachment as standard equipment.

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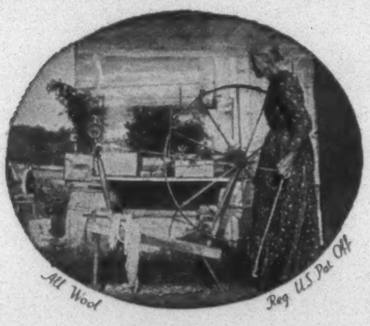

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News Of British Textiles Reviewed

At a London press conference Dec. 4, Sir Stafford Cripps said that total production of yarn by the cotton industry was then running at the highest level attained since concentration of the industry was completed in 1941, according to British Information Services, an agency of the British government. In the week ended Sept. 28, total production of yarn was 16.4 million pounds; in the week ended Nov. 8, it was 17.6 million pounds. Britain's spinning industry had within eight weeks of Sir Stafford's appeal of Sept. 16 attained the immediate increase of ten per cent in production. Part of the improvement was seasonal, but while the increase in weekly production during the six weeks to Nov. 8 was in 1946 only about two per cent, in 1947 it was 7.4 per cent. Cloth production was showing an upward trend. Weekly production in October (cotton, rayon and mixtures) averaged 43.7 million yards as compared with 41.9 million yards in the second quarter of 1947—the highest total since the war ended, and an encouraging expansion.

British rayon production in October was 20,100,000 pounds—a new record, 7½ per cent above the high September figure. Compared with October, 1946, production was up by 15½ per cent. British exports of rayon yarn have risen by six per cent. The Board of Trade decided in October to cut supplies of rayon cloth for the British home market in the first production program of 1948, in order to extend cloth exports. Whereas earlier in 1947 the home market was receiving 75 per cent of rayon cloth products, in the current program the percentage has been lowered to 65 per cent while future rates will be on a 50-50 basis with supplies for overseas customers. A limit has also been placed on non-utility material, which is to be ten per cent of home production, compared with 15 per cent in the last program.

Rayon staple fiber yarn is being imported into Britain in bulk quantities for the first time. The purpose of these imports is to increase the production of rayon cloth for export, particularly to hard currency areas. The first shipment, 300 bales of Dutch rayon yarn, reached Manchester in mid-November. This consignment, weighing 50 tons, was intended as a bulk trial shipload. It is understood that other purchases will be made from soft surrency countries in Europe who are ready to dispose of their production. The British rayon industry has increased production considerably during the first two post-war years. The monthly average export of piece goods, which was 5,218,000,000 square yards in 1938, is now 8,500,000,000. Additional raw mate-

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rial supplies are, however, essential if manufacturers are to reach their June, 1948, export target of more than $10,400,000 monthly, and new imports of yarn will prove a useful step in this direction.

Export targets for Britain's woolen industry aim at the eventual export of about half the industry's total production. Announced in mid-September, a brief resume of the program is of interest. The target to be reached by mid-1948 is an export volume of 146 per cent of the 1938 level. By the end of the year it must be raised to 182 per cent, or close to twofold that of pre-war. Piece goods, always a predominant item in Britain's woolen exports, bear the main weight of the intensified program. An annual export rate of 100,000,000 linear yards has been set for the first stage (compared with a rate of 51,000,000 in the first seven months of 1947); and 130,000,000 linear yards per year as soon as possible afterwards. Only a slight increase in yarn exports has been stipulated: in value it amounts to $2,400,000 or ten per cent of the present annual rate of $24,000,000. The bulk of the yarn output is needed by Britain's own weaving and hosiery industries, and yarn production is at present severely limited by man-power shortage.

There has been a growing surplus between production of tops and their consumption by the worsted spinners. (On Oct. 24, the Board of Trade removed maximum price controls from tops, noils and wool wastes.) The export target for tops has accordingly been set at nearly 60,000,000 pounds annually, compared with a rate of 34,000,000 pounds reached in the first seven months of 1947. In terms of currency, the ultimate target (at current prices) is $48,000,000, compared with a rate of $26,800,000 in the first half of 1947. Fifty per cent of Britain's woolen exports will be allocated to hard currency countries—that is, no less than one-quarter of all woolen production in the United Kingdom.

The production of wool tops in October was about 20 per cent above last year and is very close to the 1937 level. The production of worsted yarn shows an increase of eight per cent over last year, but there is still a big drop of about 25 per cent in comparison with 1937. The production of wool cloth, which is the principal product of the industry, is about five per cent over the 1946 rate but is still 20 per cent below 1937. The main weight of the expansion in exports must fall on the cloth, and demands an increase from the present monthly rate to about 11 million linear yards by the end of 1948.

In its second report on the British cotton textile machinery industry, which concentrates on weaving and winding machinery, the Everhead committee states that "a program of re-equipment on the scale suggested by the Cotton Working Party and in the relatively short time envisaged, could not be achieved, with the best will in the world, by the existing manufacturers." (The Cotton Working Party called for 120,000 fully automatic looms within five years.) Having carefully considered all other possibilities, the committee is satisfied that the only way in which production could be achieved on the scale or in the time envisaged, would be my means of a scheme of intensive flow of production on the lines adopted during the war for munitions. Such a scheme would require, on the one hand, government

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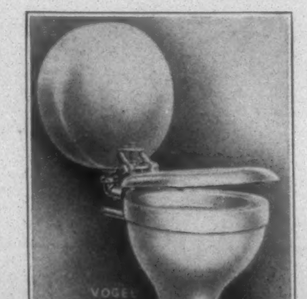

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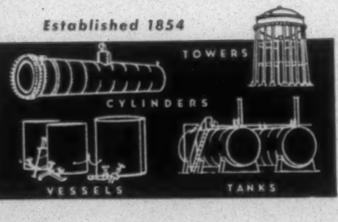

action of a far-reaching character with a view to providing (by appropriate priorities and otherwise) the necessary factories plant, equipment and labor (particularly skilled personnel): and on the other hand, the fullest co-operation on adequate and fair terms of remuneration in the matter of management, design and otherwise, of the existing automatic loom makers, and especially of the British Northrop Loom Co. Apart from its main scheme the committee urges that existing looms in Lancashire could be converted to automatic operation without making the same demands on the resources of the loom makers.

Britain's textile machinery makers have already passed their mid-1948 export target. September overseas shipments from this section of the machinery industry had a value of $8,624,000, compared with $7,680,000 set for June, 1948. A further increase in exports of less than $400,000 would bring textile plant to the target set for end of 1948.

The first British-designed and British-made automatic high speed Pirn winder was demonstrated to cotton manufacturers in Manchester recently. Suitable for a wide range of yarn counts in rayon, silk, cotton, wool or linen, the machine is stated to be able to increase output per operative by anything up to 400 per cent, as well as to reduce weaving costs.

American Viscose Corp. Declares Dividends

The directors of American Viscose Corp., at their regular meeting Jan. 7, declared dividends of $1.25 per share on the five per cent cumulative preferred stock and 50 cents on the common stock, both payable Feb. 2, 1948, to shareholders of record at the close of business on Jan. 19, 1948.

Textile Unit Told To Stress Human Values

Human relations in industry keynoted a meeting of the textile unit of the American Society of Mechanical Engineers held Jan. 8 in Boston, Mass. Robert J. Dixson, director of industrial relations for Johnson & Johnson, Inc., told the group that industry must better its human relations in the face of its 30 per cent jump in production in 1944 with three per cent fewer workers.

Other speakers heard during the session included R. G. Shepherd, Associated Factory Mutual Fire Insurance Co.; J. H. Hennessey, General Dyestuff Corp.; Albert Palmer, Crompton & Knowles Loom Works (*see abstract on Page 56*), and J. R. Mason, Millville Mfg. Co. Mr. Shep-

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herd warned that fires in the textile industry are a constant menace to personnel and production, stating "At least 60 per cent of the mills processing cotton viscose rayon fiber report fires annually. These are caused by flammability of raw materials, foreign contaminations, lint accumulation, high machine speeds and hazardous chemicals." Mills, he concluded, can have their plans of new processes and equipment reviewed by insurance companies for fire safety before installation.

Mr. Mason emphasized that all elements in a corporation should understand that company's labor and manufacturing policies at all times. The evolution of modern business has separated the manager from his working force and it has also separated management from its first line of supervisors, he pointed out. The gap between management and labor brought unionization and collective bargaining in its wake, he said, and separation of management from its supervisors will repeat that condition and the first line supervisor will be lost to managers. Unless management acts immediately to bid for the supervisor, he will also drift away and the Taft-Hartley labor law cannot, by the printed word, strengthen this tie, he concluded.

The full complement of officers in the textile division of the society was re-elected to serve another year. A. B. Studley, SKF Industries, Inc., continues as chairman. W. Arthur Smith, Jr., of Carlyle Johnson Machine Co., remains vice-chairman; R. O. Palmer, head of Palmer Research, continues as secretary. Other officers include L. T. Parkman, Westinghouse Electric Corp., recorder; S. B. Earle, Clemson College, Southern representative; Carl D. Brown, president of C. D. Brown Textile Engineering Service, inter-society and Northern representative.

Textile Technologists Re-Elect Freedman

Ephraim Freedman, director of the bureau of standards of R. H. Macy & Co., was re-elected president of the American Association of Textile Technologists at a recent meeting of the group in New York City. Other officers re-elected to serve during 1948 are Dr. George Linton of Fashion Institute, first vice-president; Fred Hoechel of Botany Mills, Inc., second vice-president; and Miss Bernice Bronner of the textile resin department of American Cyanamid Co., secretary. Olen F. Marks of American Enka Corp. was elected treasurer to succeed Ralph Gutekunst of Hellwig Dyeing Corp.

Speakers heard during the session included Julius B.

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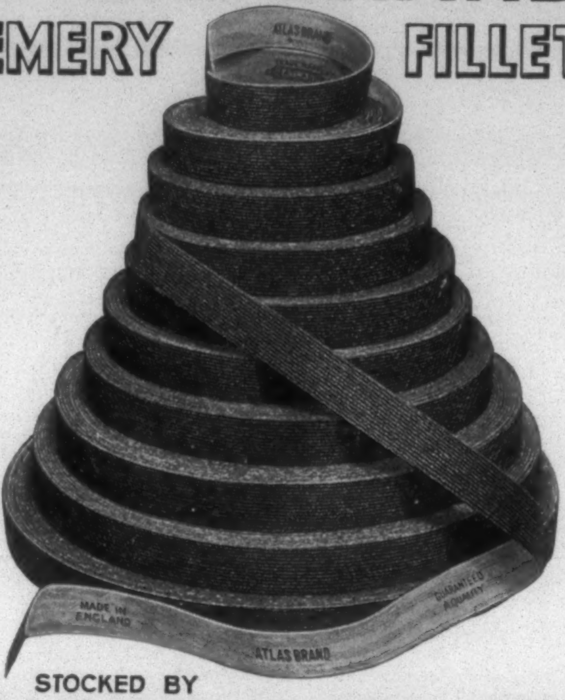

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Goldberg, research director of J. P. Stevens & Co., Inc., who discussed "Textile Research Achievements in 1947" *(see Page 29)*, and Nathaniel M. Mitchell, president of Barnes Textile Associates, Inc., recently returned from a trip to Bombay, India, who addressed the group on "Observations of the Textile Industry in India." Mr. Mitchell, in discussing the textile industry in India, told the textile technologists that country, third largest nation in the world in point of spindleage, got production through copious use of labor and by machines that strain under top speeds.

Three new members were elected to the board of governors of the association to serve for three years. They are C. W. Bendigo, editor of *Textile World;* Mr. Goldberg; and George H. Hotte of A. M. Tenney Associates. Continuing on the board of governors were the following to serve for two years: Carl I. Taber of the Nylon Division of E. I. du Pont de Nemours & Co.; Walter E. Scholer of American Viscose Corp., and Severn Miller of Wellington Sears Co., Inc. Governors who will serve for one remaining year are Lewis M. Carpenter of New Culpepper Mills, Inc.; John J. Goldsmith of Hess, Goldsmith & Co., Inc., and Joseph C. Hirsch of Cyril Johnson Woolen Co.

Three auditors who were elected to serve for this year are Leon Kapelsohn, Hearn Department Stores, Inc.; Max Schuster, Cantor Greenspan Co., Inc., and Charles Ochsner. One officer and two retiring members of the board of governors were honored for their work on the board. Mr. Gutekunst, former treasurer, and Richard S. Cox, dean of Philadelphia Textile Institute, and Stephen S. Marks, *Daily News Record,* received plaques giving recognition to their services to the association.

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Air Conditioning Bill Gets Little Support

A bill which would require air conditioning for South Carolina textile and garment plants came up for a final hearing by a sub-committee of the commerce and manufacturers committee of the state house of representatives in Columbia, S. C., Jan. 6, and failed to receive the endorsement of either labor or management. Labor leaders asked for healthful working conditions for employees in such plants, but lent no support to the pending measure, while representatives of management urged a "cautious approach" until proper standards were established. Earle R. Britton, president of the state American Federation of Labor, expressed the opinion that the bill "would not be to the best interests of South Carolina," and said that collective bargaining "if left unhampered" would be the best method to affect proper conditioning of plants. T. Frank Watkins of Anderson, general counsel for the South Carolina Manufacturers Association, urged a thorough study before adoption of any legislation of this type, saying, "This is a technical or engineering subject" and that experts should be consulted for establishing standards, lest a hardship be imposed on management and workers.

Texas Girl Is Named Maid Of Cotton

Matilda Nail, a lovely blue-eyed blonde from Fort Worth, Tex., radiating the charm and graciousness characteristic of the Lone Star State's belles, emerged victorious over 21 other Southern beauties to be named 1948 Maid of Cotton,

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the National Cotton Council reports. The glamorous maid, who hails from the nation's largest cotton-producing state, is the first Texan to serve as cotton's ambassadress of fashion and goodwill. Vital statistics reveal that she is the daughter of Mr. and Mrs. William Reilly Nail of Fort Worth, is 19 years old, five feet 8½ inches tall, weighs 128 pounds, and was a sophomore at the University of Texas when she tossed her hat into the ring to compete for the coveted title. First alternate is talented Catherine Hamrick of Gaffney, S. C., and second alternate is pretty Elizabeth Ann Stollenwerck, also a Texan, whose home is Waxahachie.

The contest finals in Memphis' Ellis Auditorium climaxed two days of hectic, but thrilling, activity for the girls. They were feted at a dinner dance by the Memphis *Press Scimitar,* entertained by the Rotary Club at a luncheon, and trained by famous cover girl Candy Jones in the essentials of modeling and make-up in an accelerated version of her popular Career Girl course. After the winner was announced, the girls were honored at a reception by the Memphis Cotton Carnival Association. Matilda will have a month's training in fashion modeling in New York City before beginning her 35,000-mile international tour sponsored by the National Cotton Council, the cotton exchanges of Memphis, New Orleans and New York, and the Memphis Cotton Carnival.

Textile Institute Leases New Quarters

The Cotton-Textile Institute, Inc., has leased the entire 15th floor at 271 Church Street, New York City, and will renovate and occupy the new quarters about March 1. Since its formation 21 years ago, the institute has occupied quarters at 320 Broadway. The new quarters are being vacated by a division of Burlington Mills Corp., which are being consolidated with other offices of the company. The new quarters are slightly smaller than those presently occupied by the institute, but the layout is more adaptable for better operations, it is said. The move is being made to obtain more modern facilities.

P. G. Wear, Southern sales manager of Penick & Ford, recently presented the library at the School of Textiles of North Carolina State College with a complete set of *Fortune* magazine, starting with the first number and running through the current issues. The copies of the distinguished business magazines are being bound and indexed for convenient use by students at the textile school.

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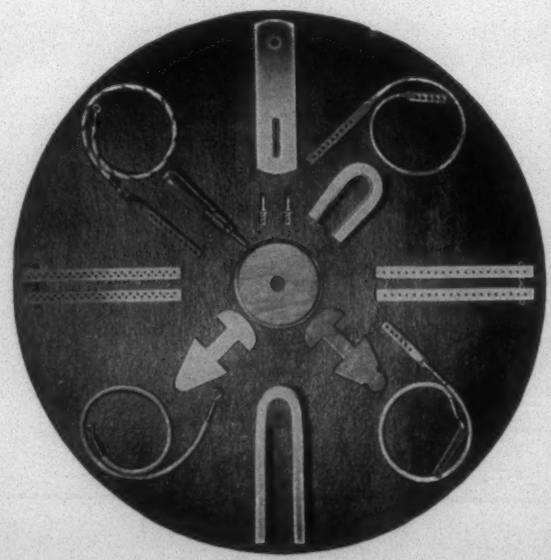

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Third Quarter Cotton Weaving Above 1946

Production of cotton broad woven goods (except tire fabrics) amounted to 2,279,900,000 linear yards during the third quarter of 1947, according to the Bureau of the Census. This was seven per cent less than in the second quarter but four per cent more than in the third quarter last year.

Print cloth yarn fabrics, colored yarn goods and related fabrics, wide cotton fabrics and napped fabrics showed increases over the third quarter, 1946. Third quarter, 1947, production for every class was below that of the second.

The data were reported by manufacturers primarily engaged in weaving fabrics over 12 inches in width of cotton, silk and rayon and other synthetic fibers. All known manufacturers in the industry were canvassed.

The fabrics showing the greatest change are "sheetings narrower than 42 inches," which increased from 240 million yards in the third quarter, 1946, to 309 million yards in the third quarter, 1947; "39-inch 80x80, 4.00 yard print cloth" production of 76 million yards in the third quarter, 1947, is almost double that of a year ago, and "39-inch 68x72 4.75 yard print cloth" production of 31 million yards is almost triple that of the third quarter, 1946; "pin stripes, pin checks and hickory stripes" production of ten million yards was more than three times as great as in the third quarter, 1946; "combed and part combed broadcloth" increased from 18 millon yards in the third quarter, 1946, to 37 million yards in the third quarter, 1947.

Of the 395,158 looms active on the first shift, there were 91 per cent on the second shift, and 44 per cent on the third. The 477 million loom hours operated was four per cent less than in the second quarter, 1947.

Textile "Gray" Market May Be Probed

Alleged "gray" market activities in the textile industry may be put under Congressional scrutiny soon. According to Sen. Joseph C. O'Mahoney (D. Wyo.), vice-chairman and ranking minority member of the Joint Committee on the Economic Report, the gray market in textiles is as rampant as that in steel and "should be investigated." Following a closed meeting of the committee last month, he remarked: "We must find out what comes between the producers of textiles (and steel) and gray market operators." The Wyoming Senator said that manufacturers of women's garments had told him that they had gone to mills and were told by the mills that no fabrics were in stock. The manufacturers were then advised by the mills, he declared, to go to specific brokers where goods were available, but at a higher price. He expressed the opinion that voluntary controls cannot be expected to stop such practices as these, stating that they must first be exposed and then curbed.

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December Spinning Figures Show Drop

The Bureau of the Census has reported that the cotton spinning industry operated during December at 114.2 per cent of capacity, on a two-shift, 80-hour week basis, compared with 120.6 per cent during November last year, and 107.8 per cent during December of 1946.

Spinning spindles in place Dec. 31 totaled 23,730,000, of which 21,412,000 were active at some time during the month, compared with 23,797,000 and 21,432,000 for November last year, and 23,927,706 and 21,688,028 for December of 1946.

Active spindle hours for December totaled 9,544,000,000 or an average of 402 hours per spindle in place, compared with 9,530,000,000 and 400 for November last year, and 8,670,795,153 and 362 for December of 1946.

Spinning spindles in place Dec. 31 included, in cotton-growing states, 18,164,000, of which 16,896,000 were active, compared with 18,143,000 and 16,889,000 for November last year, and 18,158,330 and 16,997,314 for December of 1946.

Active spindle hours for December included, in cotton-growing states, 7,890,000,000, or an average of 434 per spindle in place, compared with 8,013,000,000 and 442 for November last year, and 7,146,360,755 and 394 for December a year ago.

Mills consumed 753,406 bales of lint cotton during December, as compared with 759,498 in November of 1947 and 776,350 during December of 1946. Consumption for the five months ended Dec. 31 totaled 3,777,169 bales against 4,263,419 for the corresponding period a year previously.

Carded Yarn Producers Discuss Problems

Producers of colored carded yarns in Southern and Eastern mills met in Atlanta, Ga., Jan. 15 to discuss problems of 1948, chief of which was the rapidly advancing costs in the industry. E. Owen Fitzsimons, president of the Carded Yarn Association with headquarters in Charlotte, N. C., presided at the one-day meeting held in the Atlanta-Biltmore Hotel. The meeting was called by G. P. Barnwell of Bibb Mfg. Co., Macon, Ga., who was named chairman of the colored yarn division of the association succeeding W. N. Banks of Grantville, Ga. The yarn manufacturers gave considerable attention to increasing costs of labor, dyes and other materials in the industry and to lay plans for a cost survey.

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ALLEN CO., THE, 440 River Road, New Bedford, Mass. Sou. Repr.: L. E. Wooten, Fort Mill, S. C.

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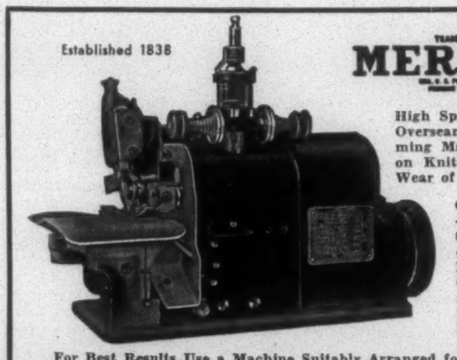

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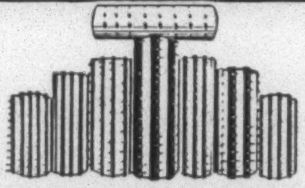

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Before Closing Down

—TEXTILE INDUSTRY HAPPENINGS AS THE MONTH ENDED—

Meetings

¶ The Southern Textile Association will hold its annual convention May 13-15 at the Ocean Forest Hotel, Myrtle Beach, S. C., according to an announcement by President Virgil E. McDowell following a meeting of the S. T. A. board of governors at Charlotte, N. C., Jan. 17. The convention program is in the process of being arranged and details of it will be announced later, stated Mr. McDowell. The gathering will get under way with a banquet sponsored by the S. T. A. associate members Thursday night, May 13, preceded and followed by entertainment. The first business session is scheduled for Friday morning, May 14; the annual golf tournament and other recreational activities will take place that afternoon, with the main convention banquet to follow in the evening; final business will be conducted Saturday morning, May 15.

Secretary-treasurer James T. McAden, Jr., requested that all convention reservations be made direct to Ralph J. Hewlett, general manager of the Ocean Forest Hotel.

The following dates for Spring divisional meetings were announced: South Carolina Division, April 3, at Parker High School, Greenville; Piedmont Division (including Gaston County Division), April 10 at Charlotte; Northern North Carolina-Virginia Division, April 17, at a place to be determined; and Eastern Carolina Division, April 24, at the North Carolina State College School of Textiles, Raleigh.

¶ Secretary Sadler Love has announced that the American Cotton Manufacturers Association will hold its annual convention April 22-24 in the Roosevelt Hotel at New Orleans, La. Reservations are to be made through the association's offices in the Liberty Life Building, Charlotte.

¶ The Carolina Yarn Association will hold its annual meeting May 13-16 in the Carolina Hotel at Pinehurst, N. C., according to an announcement by the organization's president, J. H. Mason.

Government Activity

¶ Textile workers, whose average hourly earnings have advanced more rapidly than in any leading American industry, have increased their savings and purchases far above the national averages, figures compiled by the Textile Information Service indicate. As reported by the Bureau of Labor Statistics, average hourly earnings in textile manufacturing have increased twice as fast as the rise in the cost of living and by 14 per cent more than in the lumber and timber basic products industry where the second largest rate of wage increases among 20 leading American industries was recorded. According to the bureau's figures, average hourly earnings in the textile mill products industry advanced 129 per cent from September, 1939, to September of last year while the cost of living rose 62.8 per cent during the same period.

Visitors

¶ Six operating executives of the Sung Sing Cotton Mills, Shanghai, China, who have spent the past ten months studying manufacturing methods in this country, were recent Charlotte visitors and at their request were taken on an inspection tour through Textile Bulletin's modern printing plant. Sung Sing Cotton Mills, among other plants in China, subscribes to the magazine and the visitors wished to see how the publication is produced.

Members of the party have spent five months in the H & B American Machine Co. plant at Pawtucket, R. I., and a similar period in the Saco-Lowell Shops at Biddeford, Me. They are now visiting some of the leading mills in the South in company with Lee Pickens of the H & B office in Charlotte.

Mill News

¶ Organization of the Holton Corp., which will produce plastic coated Fiberglas fabrics in a plant at Mobile, Ala., has been announced. Heading the new firm are several New Orleans, La., business men: W. H. George, president and general manager; I. R. Collord, executive vice-president; and J. P. Ward, treasurer and secretary.

Personal News

¶ It is reported from the National Cotton Council convention at Atlanta, Ga., that Oscar Johnston plans to resign from that organization's presidency.

¶ Walter G. Regnery has been named vice-president and general manager of Joanna Cotton Mills Co., Goldville, S. C., succeeding the late William A. Moorhead.

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